STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 144597

TO: Shaojia A Jiang **Location:** **Art Unit: 1617** **February 8, 2005** **Case Serial Number: 09/885247**	**From: P. Sheppard** **Location: Remsen Building** **Phone: (571) 272-2529** **sheppard@uspto.gov**

4/8/14

Search Notes

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FILE 'HCAPLUS' ENTERED AT 15:14:38 ON 08 FEB 2005
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FILE COVERS 1907 - 8 Feb 2005  VOL 142 ISS 7
FILE LAST UPDATED: 7 Feb 2005  (20050207/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


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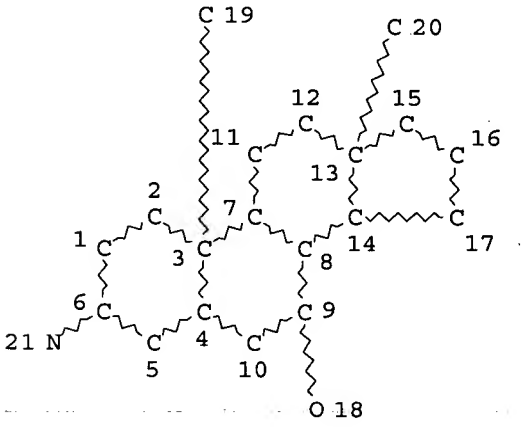


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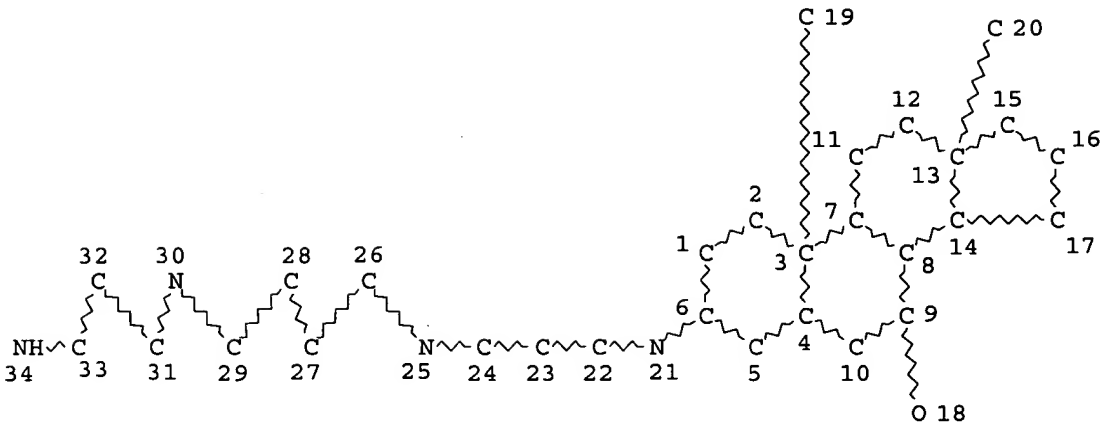

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L8 15 SEA FILE=HCAPLUS ABB=ON PLU=ON L7

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L8 ANSWER 1 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:709281 HCAPLUS
TITLE: A novel aminosterol reverses diabetes and fatty liver disease in obese mice
AUTHOR(S): Takahashi, Nobuhiko; Qi, Yong; Patel, Hiral R.; Ahima, Rexford S.
CORPORATE SOURCE: Department of Medicine, Division of Endocrinology, Diabetes and Metabolism, University of Pennsylvania, Philadelphia, PA, 19104, USA
SOURCE: Journal of Hepatology (2004), 41(3), 391-398
CODEN: JOHEEC; ISSN: 0168-8278
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Background/Aims: Non-alc. fatty liver disease (NAFLD) is common in obesity. However, weight reduction alone does not prevent the development or progression of NAFLD. Since NAFLD is associated with insulin resistance and diabetes, we hypothesized that improvement of these factors would reverse obesity-related NAFLD. Methods: We examined the effects of an aminosterol, 1436, on glucose, lipids and liver metabolism in Lepob/ob mice, a model of obesity, severe insulin resistance, diabetes, hyperlipidemia and hepatic steatosis. Results: 1436 decreased body weight, specifically fat content, by inhibiting food intake and increasing energy expenditure. In contrast to weight loss from food restriction, this aminosterol specifically lowered circulating lipids, reversed hepatic steatosis and normalized alanine aminotransferase level. 1436 decreased glucose, increased adiponectin and

enhanced insulin action in liver. These changes culminated in inhibition of hepatic triglyceride synthesis and increased fatty acid oxidation Gene expression studies confirmed a reduction in lipogenic enzymes in liver, and elevation of enzymes involved in lipid catabolism. Conclusions: These results demonstrate that 1436 is an effective treatment for insulin resistance and hepatic steatosis in Lepob/ob mice, by decreasing hepatic lipid synthesis and stimulating lipolysis. In contrast, weight loss from food restriction has no substantial effect on insulin resistance, lipids and hepatic steatosis.

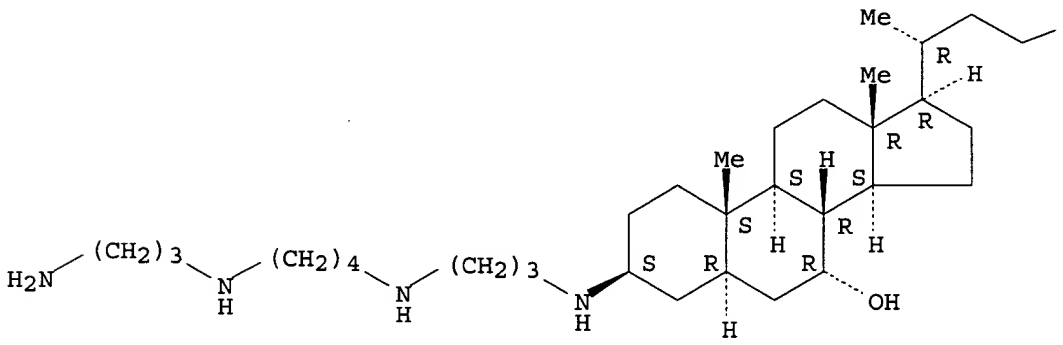
IT **186139-09-3**, MSI-1436
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(aminosterol MSI-1436 decreased body weight, fat, glucose, circulating lipids, hepatic lipogenesis and reversed insulin resistance, lipolysis, hepatic steatosis in Lep0b/0b mouse with NAFLD independent of food restriction)

RN 186139-09-3 HCAPLUS

CN Cholestane-7,24-diol, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, 24-(hydrogen sulfate), (3β,5α,7α,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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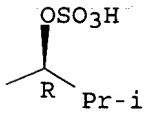

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L8 ANSWER 2 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:521657 HCAPLUS
DOCUMENT NUMBER: 138:83251
TITLE: Appetite suppression and weight reduction by a centrally active aminosterol
AUTHOR(S): Ahima, Rexford S.; Patel, Hiralben R.; Takahashi, Nobuhiko; Qi, Yong; Hileman, Stanley M.; Zasloff, Michael A.
CORPORATE SOURCE: Division of Endocrinology, Diabetes and Metabolism, University of Pennsylvania School of Medicine,

Philadelphia, PA, 19104, USA
SOURCE: Diabetes (2002), 51(7), 2099-2104
CODEN: DIAEAZ; ISSN: 0012-1797
PUBLISHER: American Diabetes Association
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The rise in obesity and its complications has generated enormous interest in the regulation of feeding and body weight We show that a spermine metabolite of cholesterol (MSI-1436) decreases body weight, specifically fat, by suppressing feeding and preventing the reduction in energy expenditure, hormonal changes, and patterns of neuropeptide expression normally associated with weight loss. MSI-1436 enters the brain after peripheral injection and is more potent when injected into the cerebral ventricle (intracerebroventricular [ICV]). Systemic or ICV MSI-1436 administration induced similar patterns of Fos immunoreactivity in the brain, especially the paraventricular hypothalamic nucleus (PVN). This brain region integrates neural signals from hypothalamic and brain stem nuclei and regulates feeding behavior, autonomic function, and neuroendocrine function. Microinjection of MSI-1436 into the PVN potently suppressed feeding and reduced body weight for several days. Unlike caloric restriction, MSI-1436 decreased mRNA levels of agouti-related peptide and neuropeptide Y in the hypothalamus. These findings indicate that MSI-1436 acts in the brain to regulate food intake and energy expenditure, likely through suppression of orexigenic hypothalamic pathways.

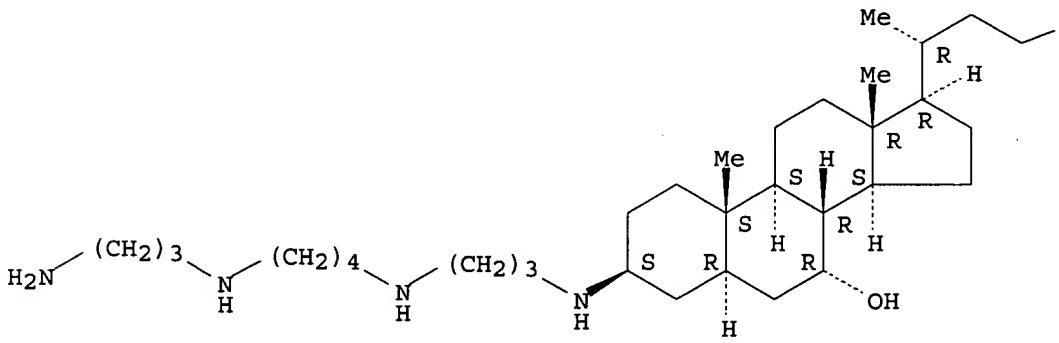
IT **186139-09-3**, MSI-1436
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(appetite suppression and weight reduction by MSI-1436)

RN 186139-09-3 HCAPLUS

CN Cholestane-7,24-diol, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, 24-(hydrogen sulfate), (3β,5α,7α,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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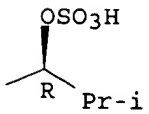


REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:133893 HCAPLUS
DOCUMENT NUMBER: 137:20503
TITLE: The synthesis of spermine analogs of the shark aminosterol squalamine
AUTHOR(S): Shu, Youheng; Jones, Stephen R.; Kinney, William A.; Selinsky, Barry S.
CORPORATE SOURCE: Chemistry Department, Villanova University, Villanova, PA, 19085, USA
SOURCE: Steroids (2002), 67(3,4), 291-304
CODEN: STEDAM; ISSN: 0039-128X
PUBLISHER: Elsevier Science Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 137:20503

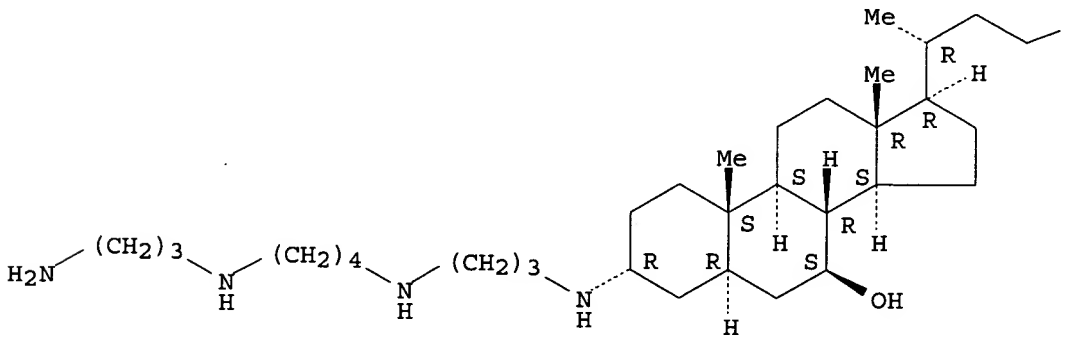
AB Aminosterols isolated from the dogfish shark Squalus acanthias are promising therapeutic agents in the treatment of infection and cancer. One of these, MSI-1436, has been shown to possess antimicrobial activity slightly better than squalamine. In this study, a series of analogs of MSI-1436 have been synthesized from stigmasterol. The 7α-hydroxy substituent of MSI-1436 was either omitted or the stereochem. modified to the 7β position. Also, analogs of MSI-1436 with 24-sulfate, 24-amino, and 24-hydroxy substituents were synthesized in order to assess the importance of the side chain functional group on antimicrobial activity. All of the analogs possess significant antimicrobial activity, suggesting that substitution at C7 and C24 of the aminosterols plays a minor role in their antimicrobial potency.

IT **390808-65-8P 434939-98-7P 434939-99-8P 434940-03-1P 434940-04-2P 434940-11-1P**
RL: BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(preparation and antibacterial activity of spermine analogs of squalamine)

RN 390808-65-8 HCAPLUS
CN Cholestane-7,24-diol, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, 24-(hydrogen sulfate), (3α,5α,7β,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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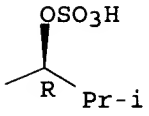
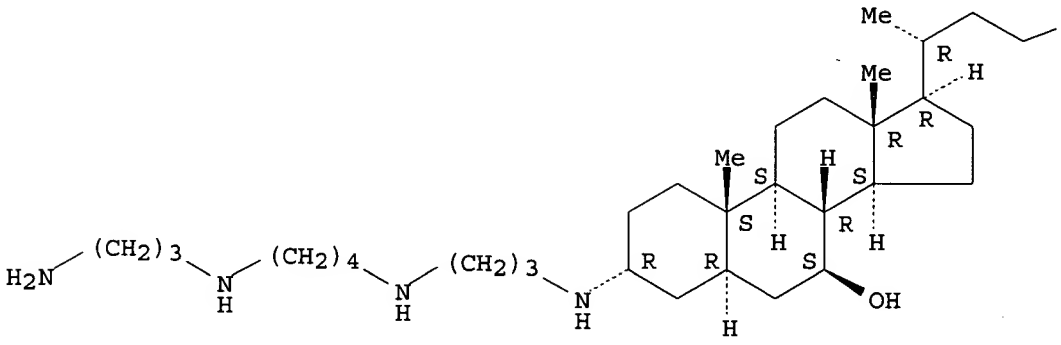


RN 434939-98-7 HCAPLUS
CN Cholestan-7-ol, 24-amino-3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, (3α,5α,7β)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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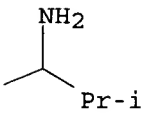
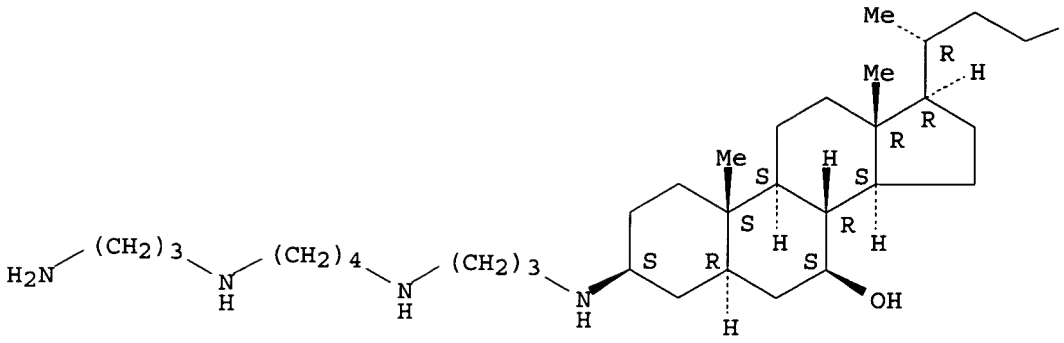


RN 434939-99-8 HCAPLUS
CN Cholestan-7-ol, 24-amino-3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, (3β,5α,7β)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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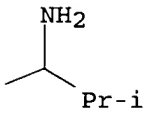

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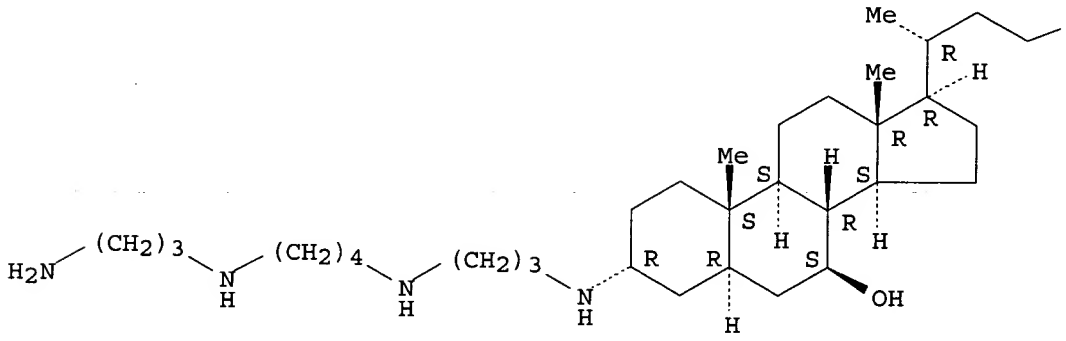
CN Cholestane-7,24-diol, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, (3α,5α,7β,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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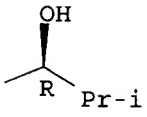
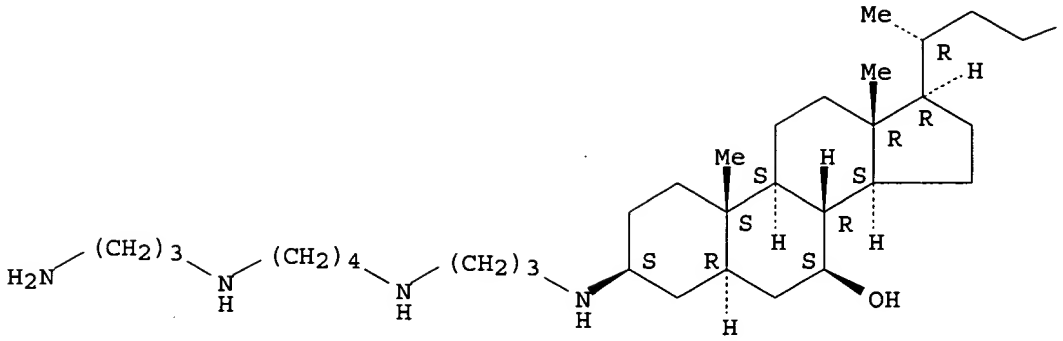


RN 434940-04-2 HCAPLUS
CN Cholestane-7,24-diol, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, (3β,5α,7β,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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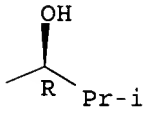
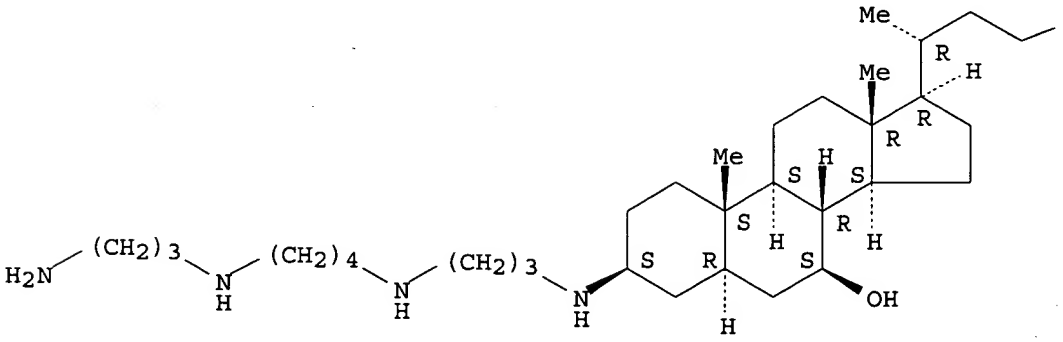


RN 434940-11-1 HCAPLUS
CN Cholestane-7,24-diol, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, 24-(hydrogen sulfate), (3β,5α,7β,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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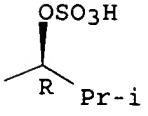

IT **434940-16-6P 434940-18-8P 434940-19-9P**
434940-20-2P 434940-21-3P 434940-22-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and antibacterial activity of spermine analogs of squalamine)

RN 434940-16-6 HCAPLUS

CN Cholestan-7-ol, 24-amino-3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, (3α,5α,7β)-, pentakis(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

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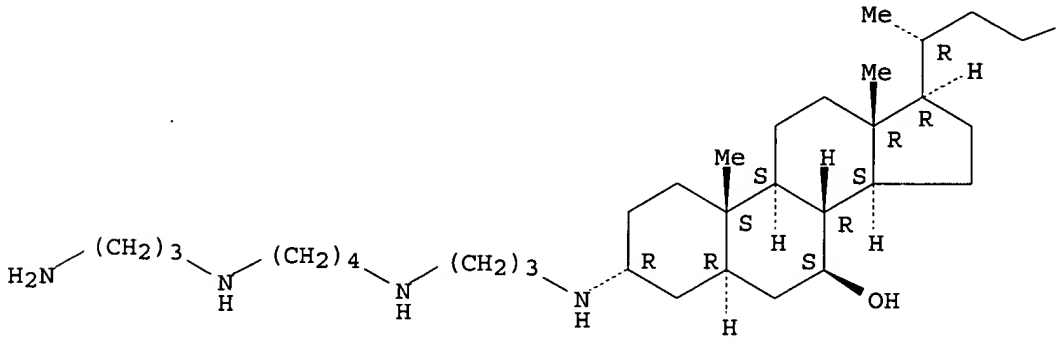
CRN 434939-98-7
CMF C37 H73 N5 O

Absolute stereochemistry.

PAGE 1-A



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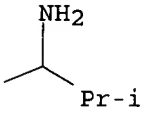

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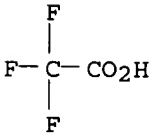


RN 434940-18-8 HCAPLUS

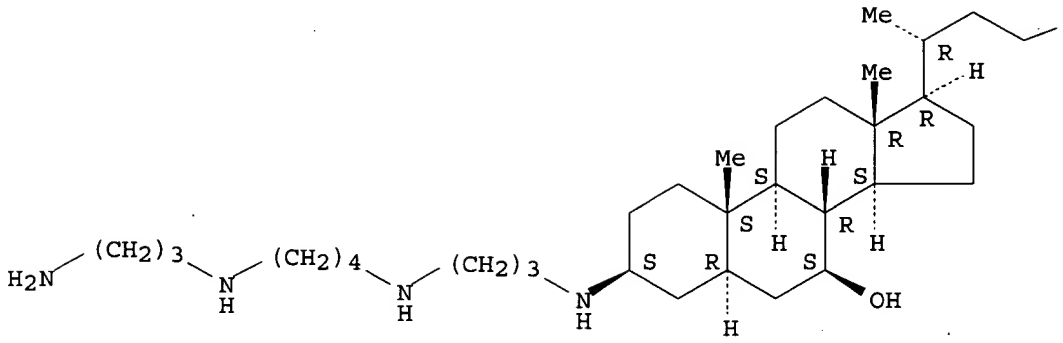
CN Cholestan-7-ol, 24-amino-3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, (3β,5α,7β)-, pentakis(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 434939-99-8
CMF C37 H73 N5 O

Absolute stereochemistry.

PAGE 1-A



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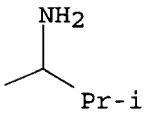

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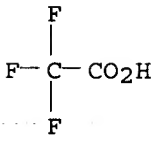


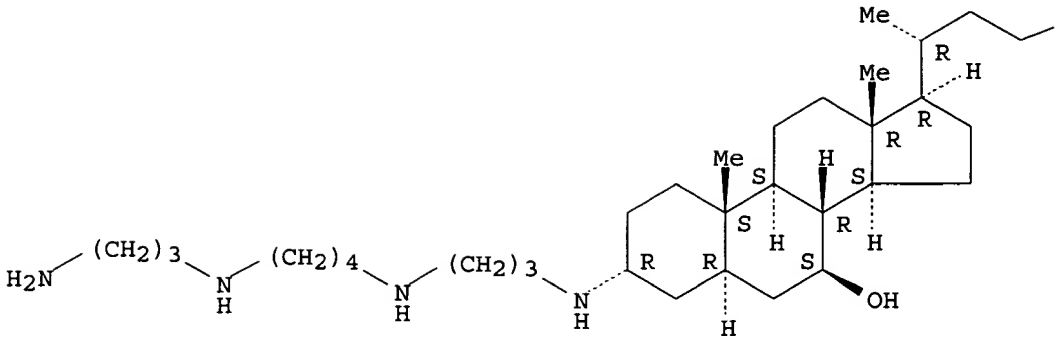
RN 434940-19-9 HCAPLUS
CN Cholestane-7,24-diol, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, (3α,5α,7β,24R)-, tetrakis(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 434940-03-1
CMF C37 H72 N4 O2

Absolute stereochemistry.

PAGE 1-A



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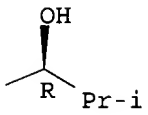

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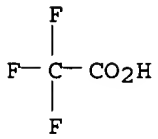


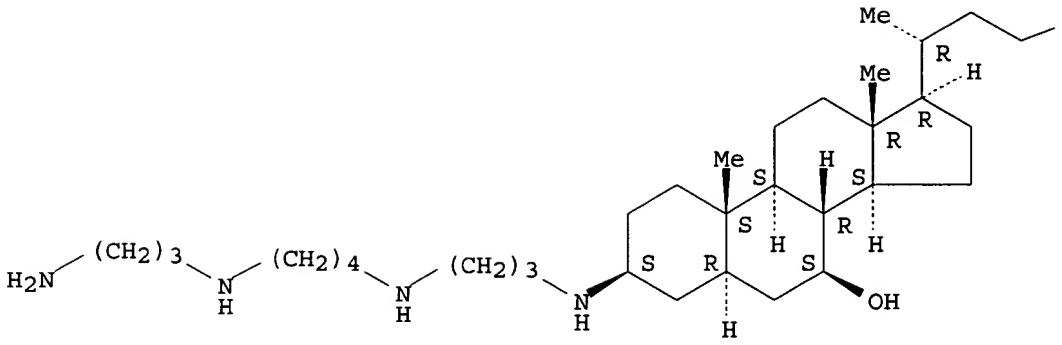
RN 434940-20-2 HCAPLUS
CN Cholestane-7,24-diol, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, (3β,5α,7β,24R)-, tetrakis(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 434940-04-2
CMF C37 H72 N4 O2

Absolute stereochemistry.

PAGE 1-A



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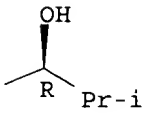

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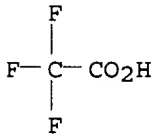

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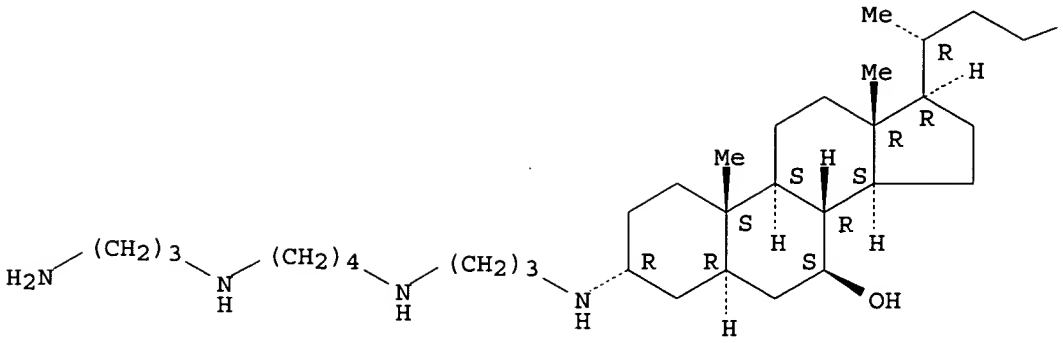
Absolute stereochemistry.

PAGE 1-A



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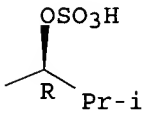

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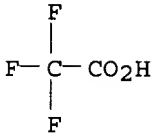
CRN 76-05-1
CMF C2 H F3 O2



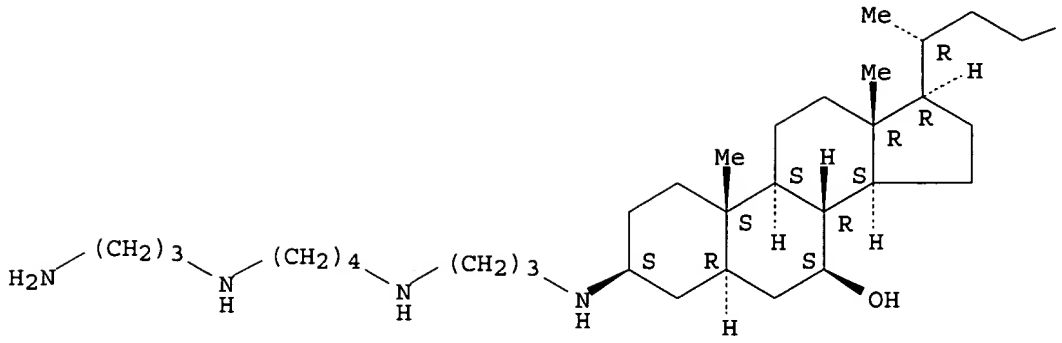
RN 434940-22-4 HCAPLUS
CN Cholestane-7,24-diol, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, 24-(hydrogen sulfate), (3β,5α,7β,24R)-, tris(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 434940-11-1
CMF C37 H72 N4 O5 S

Absolute stereochemistry.

PAGE 1-A



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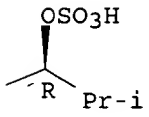
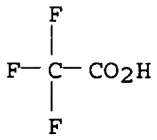


CM 2

CRN 76-05-1
CMF C2 H F3 O2



REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:72114 HCAPLUS
DOCUMENT NUMBER: 136:112700
TITLE: Therapeutic uses for aminosterol compounds
INVENTOR(S): Zasloff, Michael; Williams, Jon; Kinney, William; Anderson, Mark; McLane, Mike
PATENT ASSIGNEE(S): Genaera Corporation, USA
SOURCE: PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

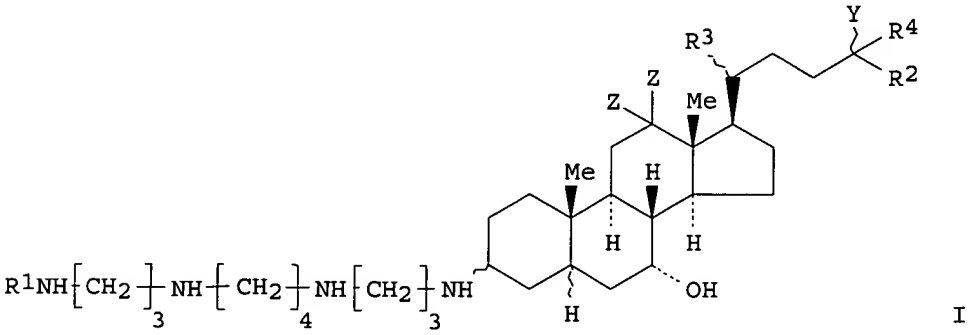
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002006299	A2	20020124	WO 2001-US22078	20010713
WO 2002006299	A3	20020606		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 2001071999 A5 20020130 AU 2001-71999 20010713
PRIORITY APPLN. INFO.: US 2000-885247 A 20000713
WO 2001-US22078 W 20010713

OTHER SOURCE(S): MARPAT 136:112700

GI



I

AB A pharmaceutical composition includes, as an active ingredient, I [R1 = H, alkyl; R2 = H, alkyl-X; X = H, OH, Cl, Br, I, F; R3 = H, alkyl; R4 = H, alkyl; Y = CO2H, NHSO2CF3, SO3H, PO3H2; OSO3H, CF3, F; Z = H, OH], or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier or excipient. Such pharmaceutical products may be used for the treatment of atherosclerosis or reduction of serum cholesterol. Methods for using the pharmaceutical compns. also are described. In these methods, various diseases are treated or other body functions are activated or inhibited by administering an effective amount of the pharmaceutical composition For example, diabetes and obesity may be treated by administering an effective amount of the pharmaceutical compns. Weight gain, and growth factor production can be inhibited by administering an effective amount of these pharmaceutical compns. Appetite can be suppressed by administering an effective amount of the pharmaceutical compns., and a diuretic effect can be produced.

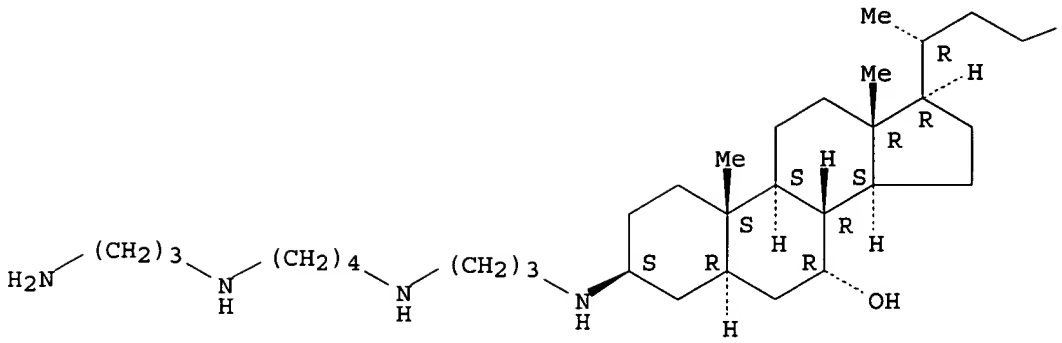
IT **186139-09-3**, MSI 1436
RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(aminosterol compds. for the treatment of obesity or diabetes and atherosclerosis)

RN 186139-09-3 HCAPLUS

CN Cholestane-7,24-diol, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, 24-(hydrogen sulfate), (3β,5α,7α,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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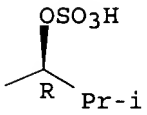


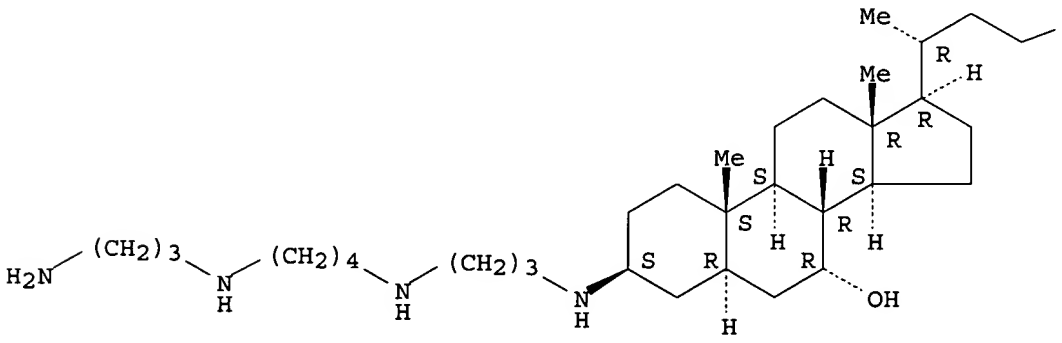
IT **390808-63-6**, MSI 1521 **390808-64-7**, MSI 1701
390808-65-8, MSI 1673 **390808-67-0**, MSI 1777
390808-68-1, MSI 1814 **390808-69-2**, MSI 1839
390808-70-5, MSI 1888
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(aminosterol compds. for the treatment of obesity or diabetes and atherosclerosis)

RN 390808-63-6 HCAPLUS

CN Cholestane-7,24-diol, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, (3β,5α,7α,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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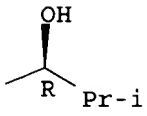
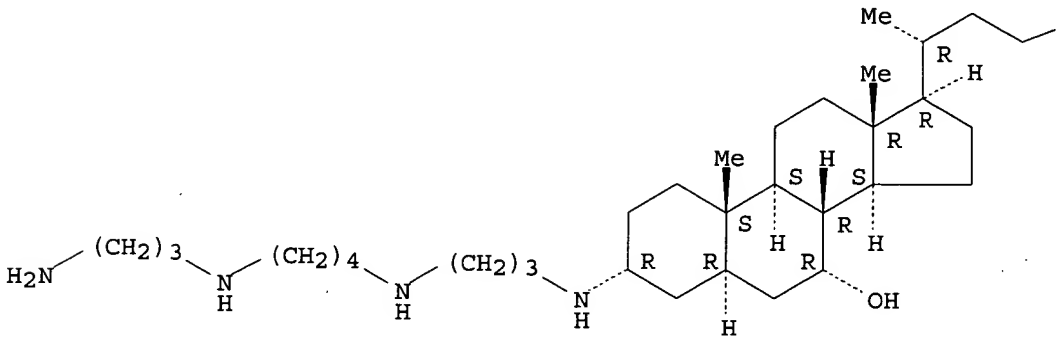


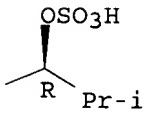
RN 390808-64-7 HCAPLUS
CN Cholestane-7,24-diol, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, 24-(hydrogen sulfate), (3α,5α,7α,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



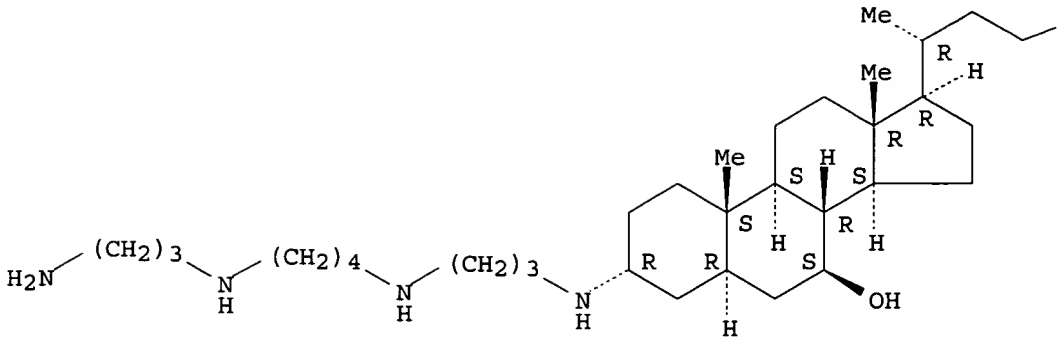
PAGE 1-B



RN 390808-65-8 HCAPLUS
CN Cholestane-7,24-diol, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, 24-(hydrogen sulfate), (3α,5α,7β,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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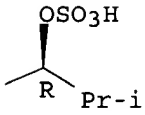
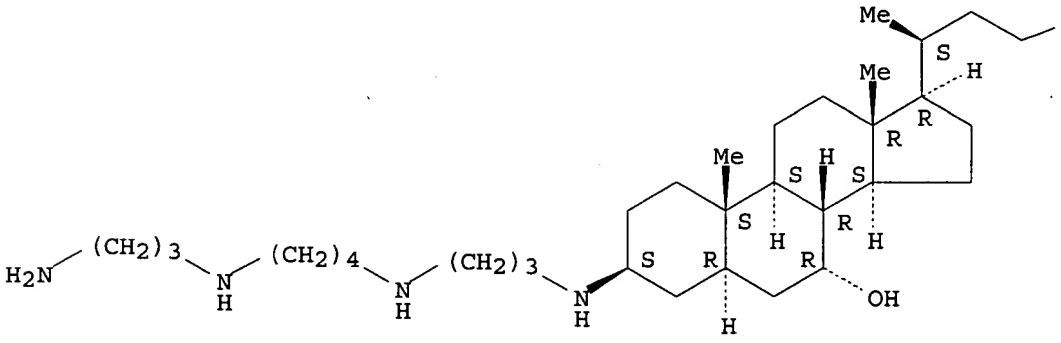


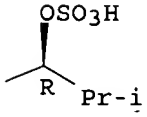
RN 390808-67-0 HCAPLUS
CN Cholestane-7,24-diol, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, 24-(hydrogen sulfate), (3β,5α,7α,20S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

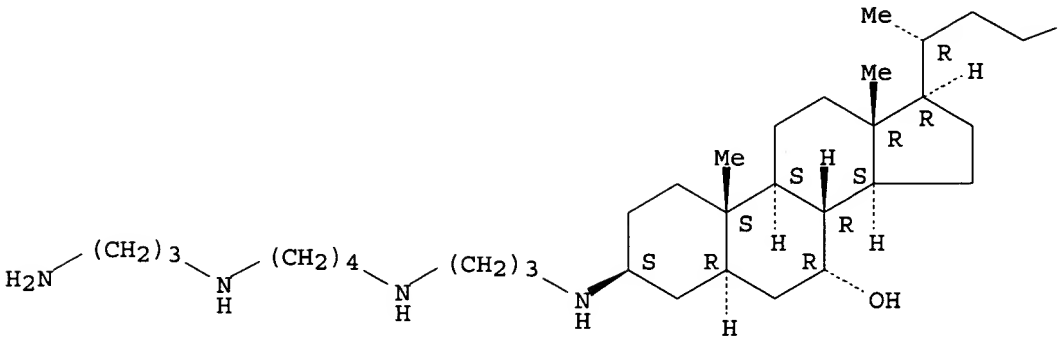


RN 390808-68-1 HCAPLUS
CN Cholestane-7,24-diol, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]a

mino]-, 24-(hydrogen sulfate), (3β,5α,7α,24S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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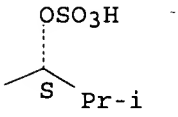
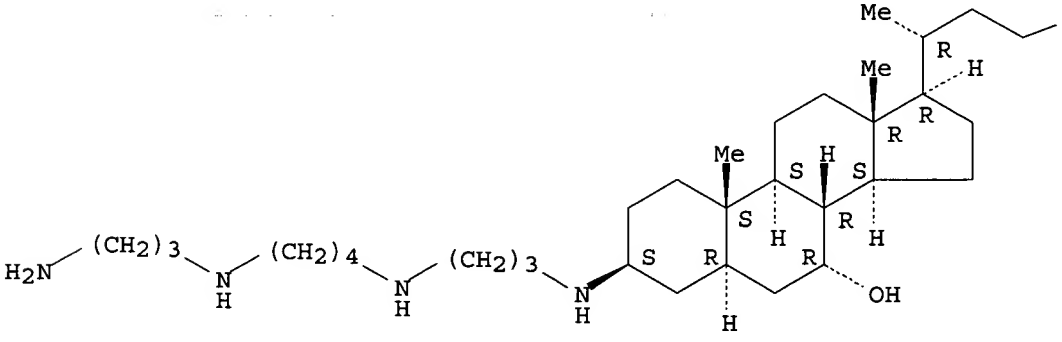


RN 390808-69-2 HCAPLUS
CN Ergostane-7,24,28-triol, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, 24-(hydrogen sulfate), (3β,5α,7α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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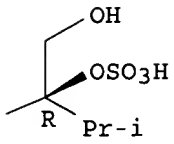
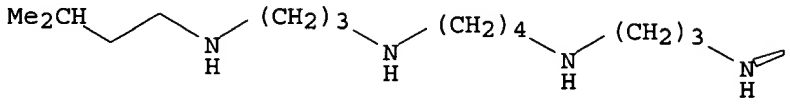


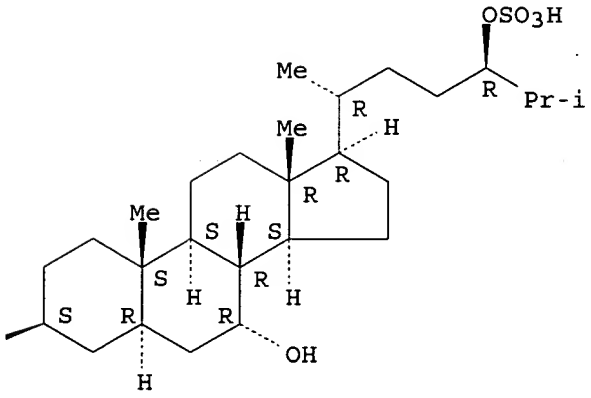
RN 390808-70-5 HCAPLUS
CN Cholestane-7,24-diol, 3-[[3-[[4-[[3-[(3-methylbutyl)amino]propyl]amino]butyl]amino]propyl]amino]-, 24-(hydrogen sulfate), (3β,5α,7α,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



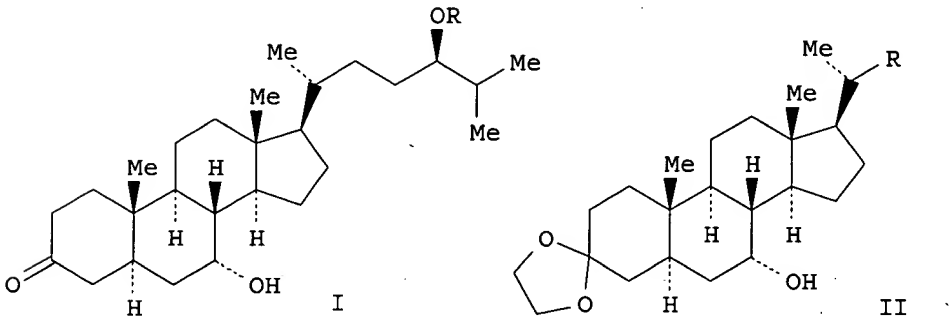
L8 ANSWER 5 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:780935 HCAPLUS
DOCUMENT NUMBER: 135:318612
TITLE: A process for the preparation of 7α-hydroxy 3-aminosubstituted sterols using intermediates with an unprotected 7α-hydroxy group
INVENTOR(S): Kinney, William A.; Zhang, Xuehai; Michalak, Ronald

PATENT ASSIGNEE(S): Genaera Corporation, USA
SOURCE: PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001079255	A1	20011025	WO 2001-US12004	20010412
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2406847	AA	20011025	CA 2001-2406847	20010412
EP 1274718	A1	20030115	EP 2001-926924	20010412
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2003531148	T2	20031021	JP 2001-576852	20010412
US 2003171576	A1	20030911	US 2002-268660	20021011

PRIORITY APPLN. INFO.: US 2000-196646P P 20000412
WO 2001-US12004 W 20010412

OTHER SOURCE(S): CASREACT 135:318612; MARPAT 135:318612
GI



AB An efficient method for the synthesis of aminosterol compds. such as squalamine and compound 1436 is described. A method of the invention provides for regioselective oxidation and regioselective sulfonation of a fused ring system. The fused ring base can be, for example, a steroid ring base. The aminosterol compds. are effective as, among others, antibiotics, antiangiogenic agents and NHE3 inhibitors. Thus, squalamine and compound 1436 intermediate I (R = SO3H) was prepared by the regioselective oxidation of II (R = CH2OH) with NaOCl and TEMPO to give II (R = CHO), and regioselective sulfonation of I (R = H).

IT **367955-25-7P**
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(preparation of 7α-hydroxy-3-amino-substituted steroids via regioselective oxidation and sulfonation)

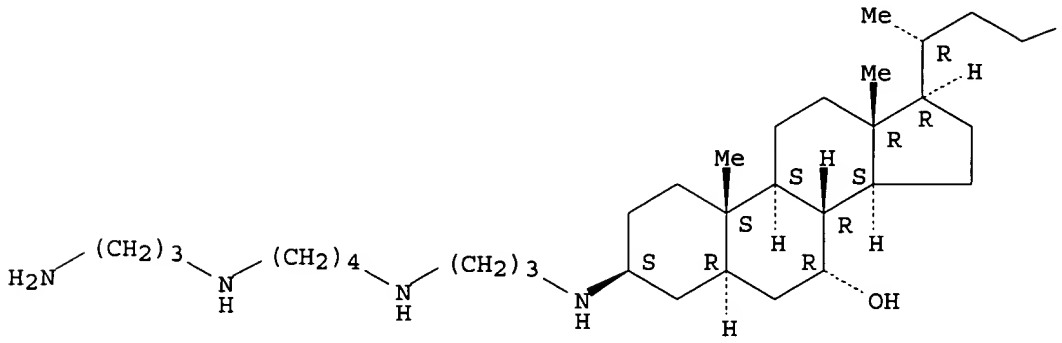
RN 367955-25-7 HCAPLUS
CN Cholestane-7,24-diol, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, 24-(hydrogen sulfate), (3β,5α,7α,24R)-, tris(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 186139-09-3
CMF C37 H72 N4 O5 S

Absolute stereochemistry.

PAGE 1-A



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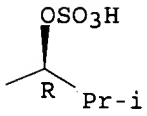
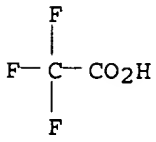


CM 2

CRN 76-05-1
CMF C2 H F3 O2



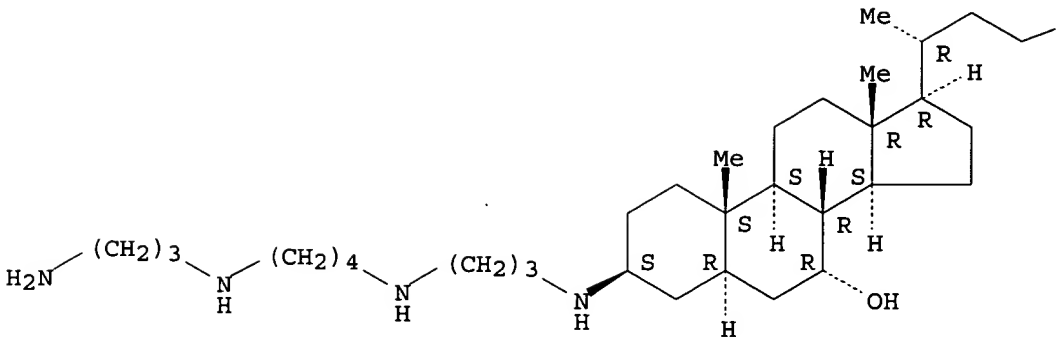
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 6 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:394818 HCAPLUS
DOCUMENT NUMBER: 136:145000
TITLE: A spermine-coupled cholesterol metabolite from the shark with potent appetite suppressant and antidiabetic properties
AUTHOR(S): Zasloff, M.; Williams, J. I.; Chen, Q.; Anderson, M.;

Maeder, T.; Holroyd, K.; Jones, S.; Kinney, W.; Cheshire, K.; McLane, M.
CORPORATE SOURCE: Magainin Pharmaceuticals, Plymouth Meeting, PA, 19462, USA
SOURCE: International Journal of Obesity (2001), 25(5), 689-697
CODEN: IJOBDP; ISSN: 0307-0565
PUBLISHER: Nature Publishing Group
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The authors describe the pharmacol. properties of a novel spermine-cholesterol adduct, MSI 1436 (3β-N-1 (spermine)-7α, 24R-dihydroxy-5α-cholestane 24-sulfate), which causes reversible suppression of food and fluid intake in mammals resulting in profound weight loss, not associated with other signs or symptoms of illness, and which exhibits antidiabetic properties in genetically obese mice. Wild-type rodents and strains with genetic obesity were studied. Effects on food and fluid intake, body weight and composition were examined along with pharmacol. and toxicol. parameters. MSI-1436 induces profound inhibition of food and fluid intake in rats and mice, resulting in significant weight loss. MSI-1436 is active when introduced directly into the 3rd ventricle of the rat, suggesting the compound acts on central targets. Pair-feeding studies suggest that MSI-1436 causes weight loss by suppressing food intake. Fluid intake is also profoundly reduced but animals remain normally hydrated and defend both water and electrolyte balance from parenteral administration. MSI-1436 is active in ob/ob, db/db, agouti, and MC4 receptor knockout mice. MSI-1436 was administered to ob/ob mice over a 4 mo period via a regimen that safely controls body weight, glucose homeostasis, and blood serum cholesterol levels. Following MSI-1436 treatment, db/db mice preferentially mobilize adipose tissue and hyperglycemia is corrected A naturally occurring spermine metabolite of cholesterol, isolated from the dogfish shark, Squalus acanthias, was identified that induces profound reduction in food and fluid intake in rodents in a setting where thirst is preserved and fluid and electrolyte homeostasis appears to be functioning normally. MSI-1436 probably acts on a central target involving neural circuits that lie downstream from the leptin and the MC4 receptors. Although long-term administration can be accomplished safely in mice, the utility of this compound as a potential human therapeutic awaits an anal. of its pharmacol. properties in man.
IT **186139-09-3**, MSI 1436
RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(MSI 1436; suppression of food and fluid intake by MSI-1436)
RN 186139-09-3 HCAPLUS
CN Cholestane-7,24-diol, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, 24-(hydrogen sulfate), (3β,5α,7α,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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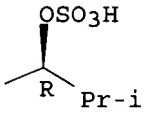
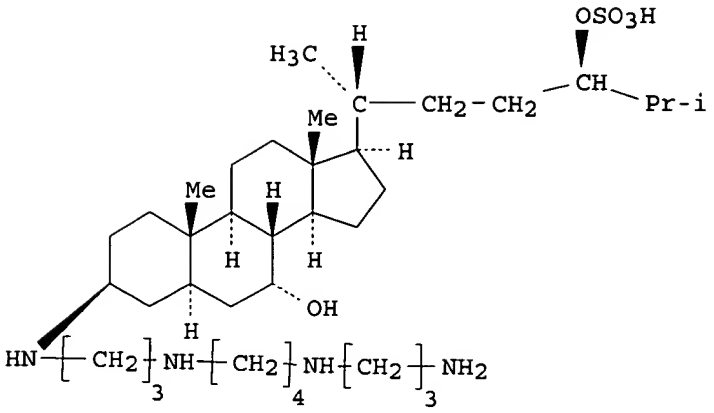


REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 7 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:216506 HCAPLUS
DOCUMENT NUMBER: 132:345566
TITLE: Aminosterols from the dogfish shark Squalus acanthias
AUTHOR(S): Rao, Meenakshi N.; Shinnar, Ann E.; Noecker, Lincoln A.; Chao, Tessa L.; Feibush, Binyamin; Snyder, Brad; Sharkansky, Ilya; Sarkahian, Ani; Zhang, Xuehai; Jones, Stephen R.; Kinney, William A.; Zasloff, Michael
CORPORATE SOURCE: Magainin Pharmaceuticals Inc., Plymouth Meeting, PA, 19462, USA
SOURCE: Journal of Natural Products (2000), 63(5), 631-635
CODEN: JNPRDF; ISSN: 0163-3864
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

AB Seven new aminosterols related to squalamine were isolated from the liver of the dogfish shark Squalus acanthias. Their structures were determined using spectroscopic methods, including 2D NMR and HRFABMS. These aminosterols possess a relatively invariant cholestane skeleton with a trans AB ring junction, a spermidine or spermine attached equatorially at C3, and a steroidal side-chain that may be sulfated. The structure of the lone spermine conjugate (I), MSI-1436, was confirmed by its synthesis from (5α,7α,24R)-7-hydroxy-3-ketocholestan-24-yl sulfate. Some members of this family of aminosterols exhibit a broad spectrum of antimicrobial activity comparable to squalamine.

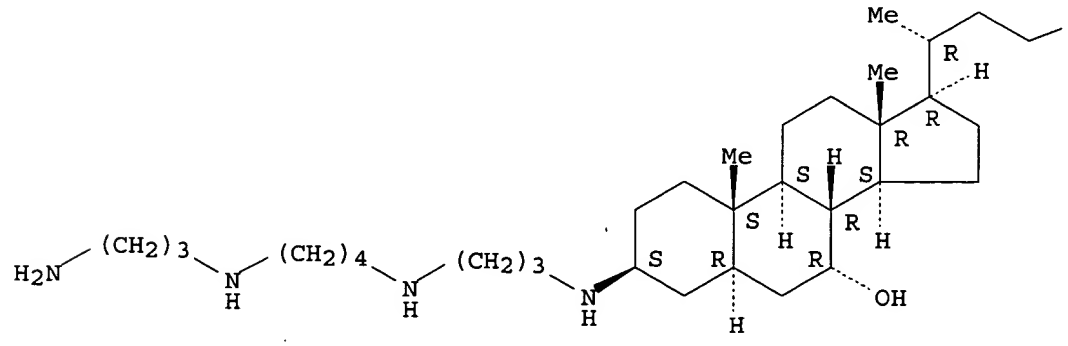
IT **186139-09-3P**
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(isolation and antimicrobial activities of aminosterols from dogfish shark)

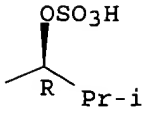
RN 186139-09-3 HCAPLUS

CN Cholestane-7,24-diol, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, 24-(hydrogen sulfate), (3β,5α,7α,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A





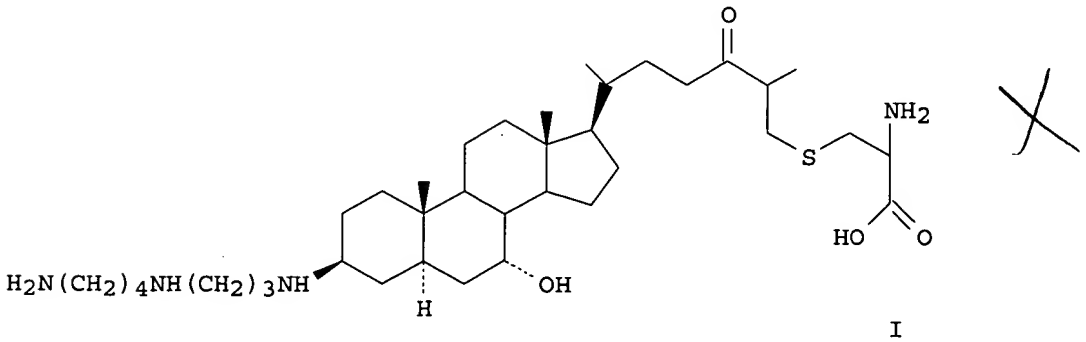
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 8 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:133525 HCAPLUS
DOCUMENT NUMBER: 132:185403
TITLE: Aminosterol compounds and uses thereof
INVENTOR(S): Rao, Meena; Feibush, Binyamin; Kinney, William; Zasloff, Michael; Noecker, Lincoln
PATENT ASSIGNEE(S): Magainin Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000009137	A2	20000224	WO 1999-US18322	19990812
WO 2000009137	A3	20000518		
W: AU, CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2339174	AA	20000224	CA 1999-2339174	19990812
AU 9955575	A1	20000306	AU 1999-55575	19990812
AU 773038	B2	20040513		
EP 1105407	A2	20010613	EP 1999-942130	19990812
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002522501	T2	20020723	JP 2000-564639	19990812
US 6388108	B1	20020514	US 2001-762999	20010529

PRIORITY APPLN. INFO.: US 1998-96337P P 19980812
WO 1999-US18322 W 19990812

GI



I

AB Newly isolated aminosterol compds. and pharmaceutical compns. based on the aminosterol compds. are described. Methods for the treatment of various disorders, for example, a microbial infection, are also described.

Aminosterols such as I were isolated from dogfish shark liver. The antimicrobial activity of eleven aminosterols were given.

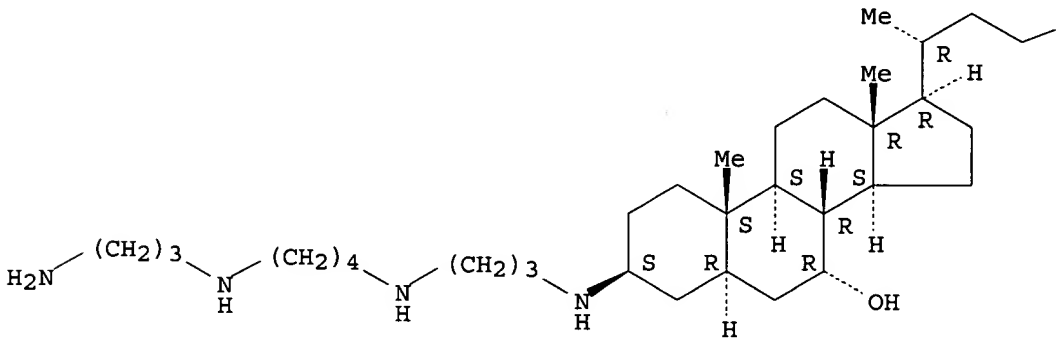
IT **259173-59-6**
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(antimicrobial aminosterols from shark liver)

RN 259173-59-6 HCAPLUS

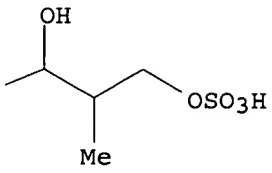
CN Cholestane-7,24,26-triol, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, 26-(hydrogen sulfate), (3β,5α,7α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



L8 ANSWER 9 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:73008 HCAPLUS

DOCUMENT NUMBER: 130:232274

TITLE: Squalamine, a novel cationic steroid, specifically inhibits the brush-border Na+/H+ exchanger isoform NHE3

AUTHOR(S): Akhter, S.; Nath, S. K.; Tse, C. M.; Williams, J.; Zasloff, M.; Donowitz, M.

CORPORATE SOURCE: Departments of Medicine and Physiology, The Johns Hopkins University School of Medicine, Baltimore, MD, 21205, USA

SOURCE: American Journal of Physiology (1999), 276(1, Pt. 1), C136-C144
CODEN: AJPHAP; ISSN: 0002-9513

PUBLISHER: American Physiological Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Squalamine, an endogenous mol. found in the liver and other tissues of Squalus acanthias, has antibiotic properties and causes changes in

endothelial cell shape. The latter suggested that its potential targets might include transport proteins that control cell volume or cell shape. The effect of purified squalamine was examined on cloned Na+/H+ exchanger isoforms NHE1, NHE2, and NHE3 stably transfected in PS120 fibroblasts. Squalamine (1-h pretreatment) decreased the maximal velocity of rabbit NHE3 in a concentration-dependent manner (13, 47, and 57% inhibition with 3, 5, and 7 μg/mL, resp.) and also increased K'[H+]i. Squalamine did not affect rabbit NHE1 or NHE2 function. The inhibitory effect of squalamine was time dependent, with no effect of immediate addition and maximum effect with 1 h of exposure, and fully reversible. Squalamine pretreatment of the ileum for 60 min inhibited brush-border membrane vesicle Na+/H+ activity by 51%. Further investigation into the mechanism of squalamine's effects showed that squalamine required the COOH-terminal 76 amino acids of NHE3. Squalamine had no cytotoxic effect at the concns. studied, as indicated by monitoring lactate dehydrogenase release. These results indicate that squalamine is a specific inhibitor of the brush-border NHE isoform NHE3 and not NHE1 or NHE2. Squalamine acts in a nontoxic and fully reversible manner and has a delayed effect, indicating that it may influence brush-border Na+/H+ exchanger function indirectly, through an intracellular signaling pathway or by acting as an intracellular modulator.

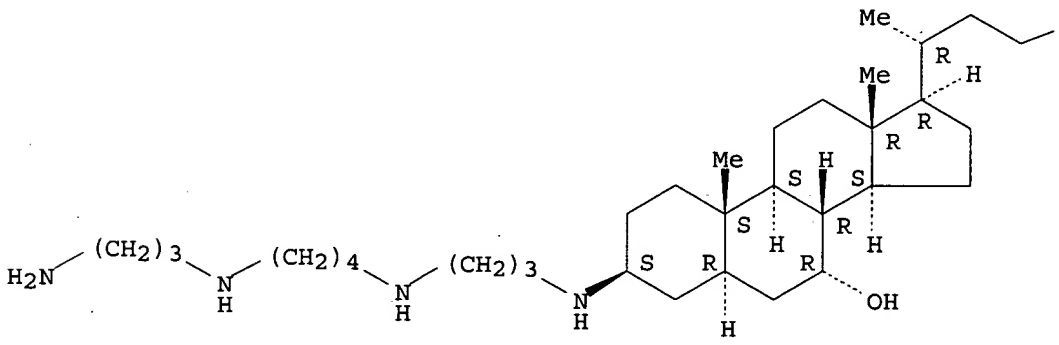
IT **186139-09-3**, Aminosterol 1436
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(squalamine analog inhibits the brush-border Na+/H+ exchanger isoform NHE3)

RN 186139-09-3 HCAPLUS

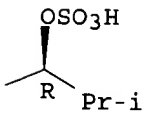
CN Cholestane-7,24-diol, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, 24-(hydrogen sulfate), (3β,5α,7α,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



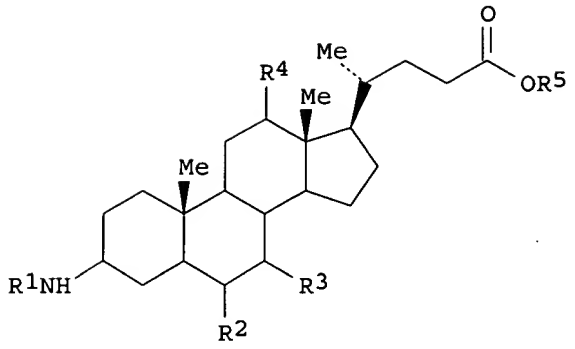
REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 10 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:34511 HCAPLUS
DOCUMENT NUMBER: 130:81698
TITLE: Preparation of aminosterol ester compounds
INVENTOR(S): Zasloff, Michael; Kinney, William; Jones, Steven
PATENT ASSIGNEE(S): Magainin Pharmaceuticals, Inc., USA
SOURCE: U.S., 83 pp., Cont.-in-part of U.S. 5,637,691.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

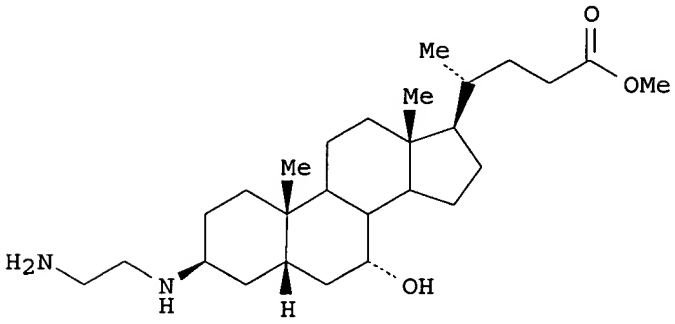
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5856535	A	19990105	US 1996-769689	19961218
US 5637691	A	19970610	US 1994-290826	19940818
US 5733899	A	19980331	US 1995-416883	19950420
US 5721226	A	19980224	US 1995-478763	19950607
EP 1420027	A2	20040519	EP 2004-2943	19960607
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
CA 2274779	AA	19980625	CA 1997-2274779	19971218
WO 9827106	A1	19980625	WO 1997-US23447	19971218
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9857087	A1	19980715	AU 1998-57087	19971218
EP 946586	A1	19991006	EP 1997-953313	19971218
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001506267	T2	20010515	JP 1998-527987	19971218

PRIORITY APPLN. INFO.:		
US 1994-290826	A2	19940818
US 1995-416883	A2	19950420
US 1995-483059	A2	19950607
US 1993-29018	B2	19940310
WO 1994-US2397	W	19940316
WO 1994-US10265	W	19940913
US 1995-475572	A	19950607
US 1995-476855	A	19950607
US 1995-479455	A	19950607
US 1995-479457	A	19950607
US 1995-483057	A	19950607
US 1995-487443	A	19950607
EP 1996-922490	A3	19960607
US 1996-769689	A	19961218
WO 1997-US23447	W	19971218

OTHER SOURCE(S): MARPAT 130:81698
GI



I



II

AB Aminosterols of formula I [R1 = alkylamino, aminopropylpiperazinylpropyl, etc.; R2-R4 = H, OH; R5 = alkyl] are prepared as antibiotic, antifungal, anti-HIV, antiangiogenic and antitumor agents. Thus, ethylenediamine was added to Me chenodeoxycholate to give II. The antibiotic activity of II against C. albicans was 16 μg/mL.

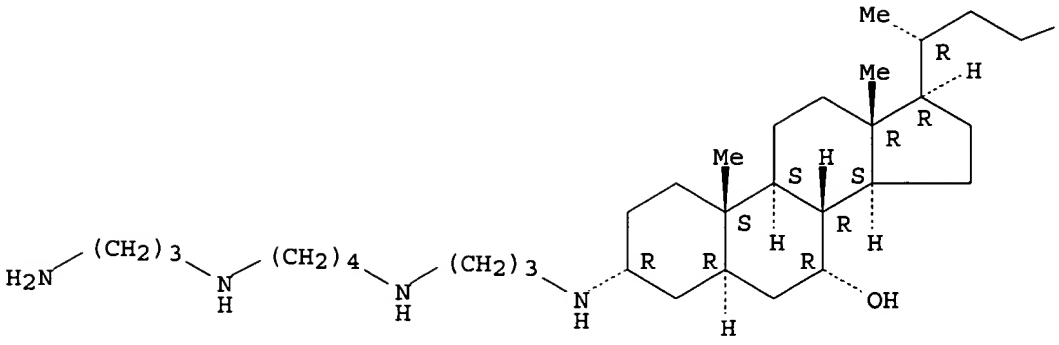
IT **186139-28-6P 186139-30-0P 186139-32-2P**
186139-52-6P 186139-58-2P 186139-59-3P
209524-70-9P 209524-72-1P 218925-29-2P
218925-34-9P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of aminosterol compds. as pharmaceutical agents)

RN 186139-28-6 HCAPLUS

CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, methyl ester, tetrahydrochloride, (3α,5α,7α)- (9CI) (CA INDEX NAME)

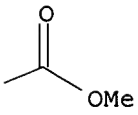
Absolute stereochemistry.

PAGE 1-A



●4 HCl

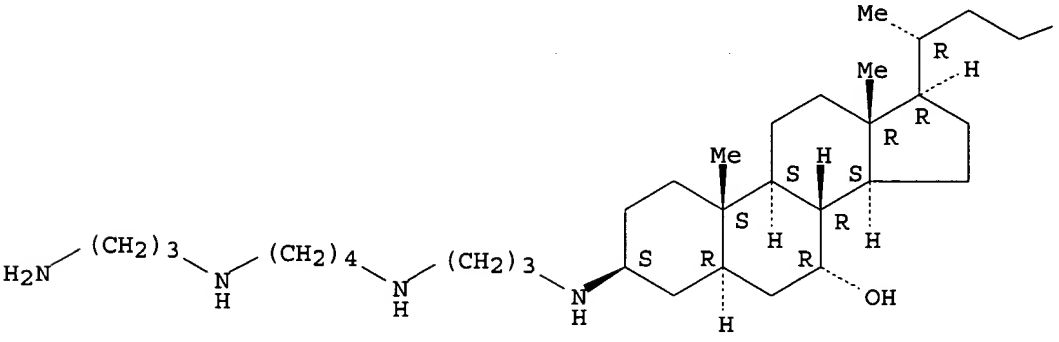
PAGE 1-B



RN 186139-30-0 HCAPLUS
CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, methyl ester, tetrahydrochloride, (3β,5α,7α)- (9CI) (CA INDEX NAME)

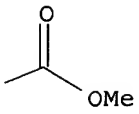
Absolute stereochemistry.

PAGE 1-A



●4 HCl

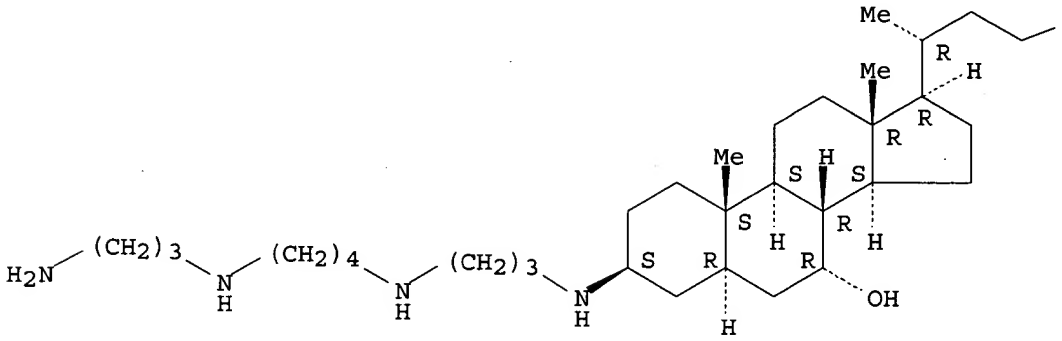
PAGE 1-B



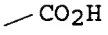
RN 186139-32-2 HCAPLUS
CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, (3β,5α,7α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



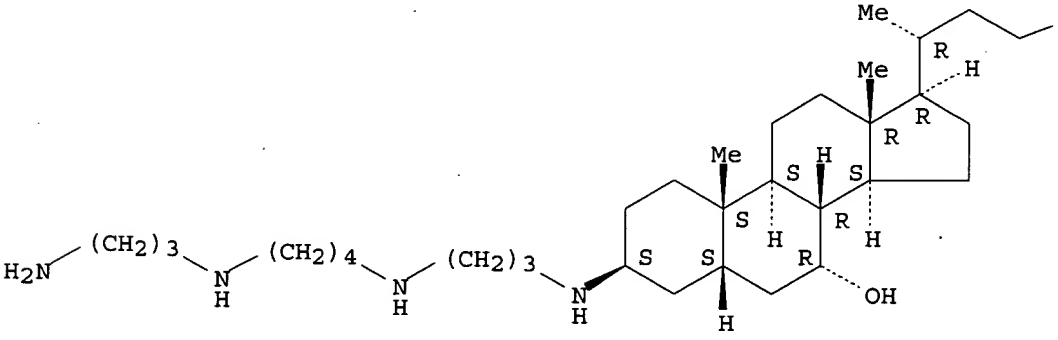
PAGE 1-B



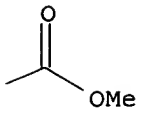
RN 186139-52-6 HCAPLUS
CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, methyl ester, (3β,5β,7α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



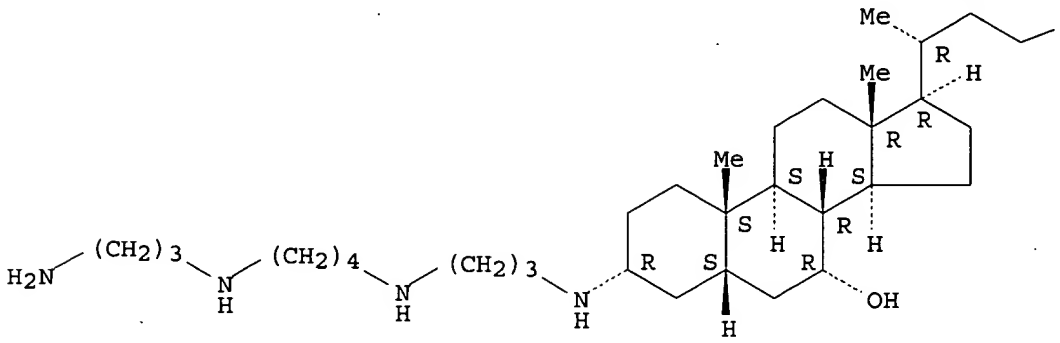
PAGE 1-B



RN 186139-58-2 HCAPLUS
CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, (3α,5β,7α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

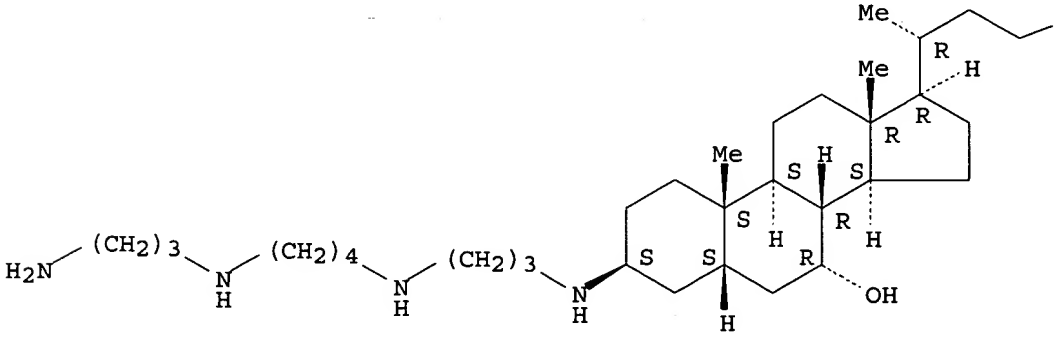


PAGE 1-B

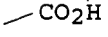
RN 186139-59-3 HCAPLUS
CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, (3β,5β,7α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



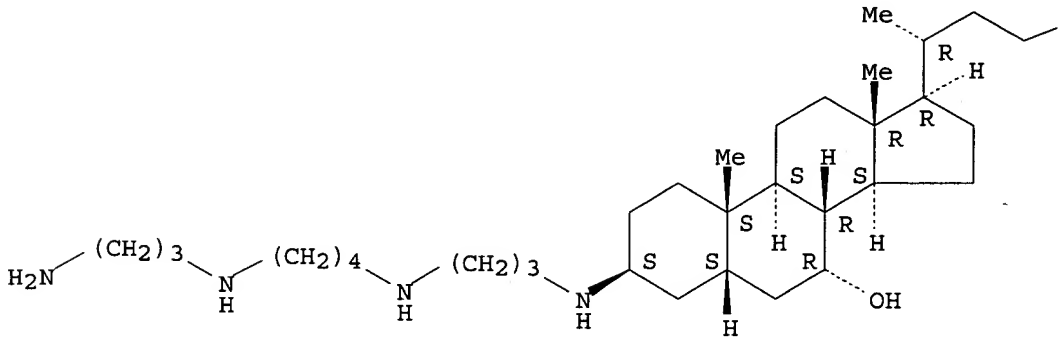
PAGE 1-B



RN 209524-70-9 HCAPLUS
CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, methyl ester, tetrahydrochloride, (3β,5β,7α)- (9CI) (CA INDEX NAME)

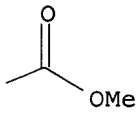
Absolute stereochemistry.

PAGE 1-A



●4 HCl

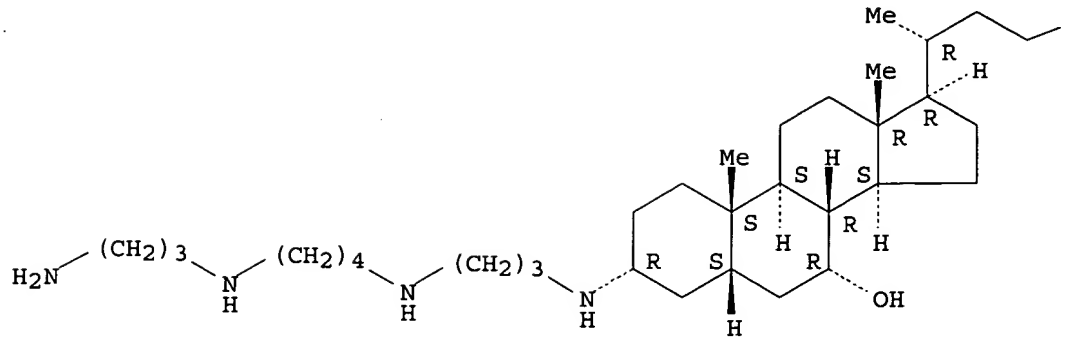
PAGE 1-B



RN 209524-72-1 HCAPLUS
CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, tetrahydrochloride, (3α,5β,7α)- (9CI) (CA INDEX NAME)

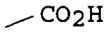
Absolute stereochemistry.

PAGE 1-A



● 4 HCl

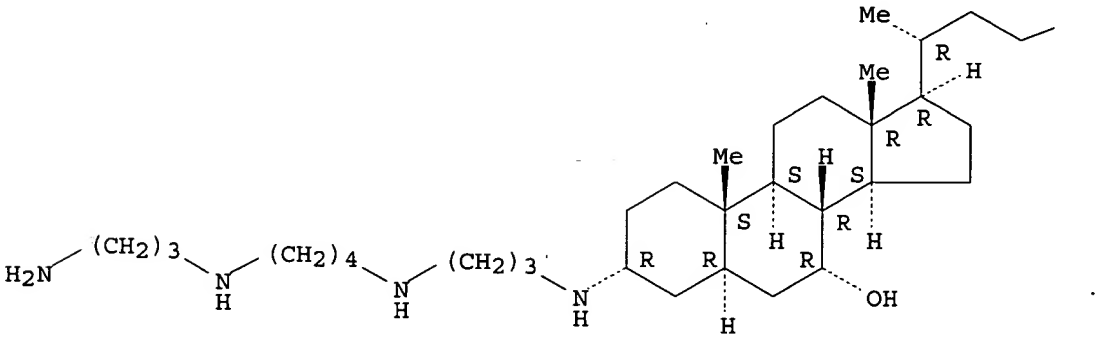
PAGE 1-B



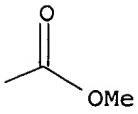
RN 218925-29-2 HCAPLUS
CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, methyl ester, (3α,5α,7α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

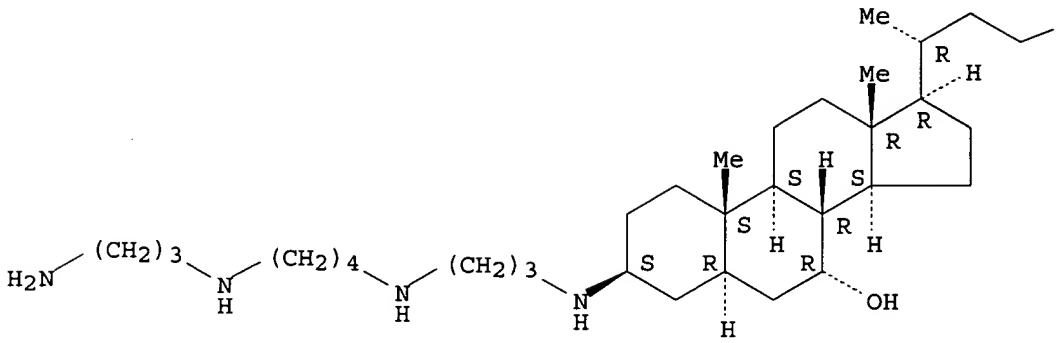


RN 218925-34-9 HCAPLUS
CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]ami

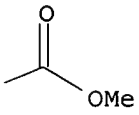
no]-7-hydroxy-, methyl ester, (3β,5α,7α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 11 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1998:424262 HCAPLUS
DOCUMENT NUMBER: 129:95648
TITLE: Preparation of aminosterol ester compounds
INVENTOR(S): Zasloff, Michael; Kinney, William; Jones, Steven
PATENT ASSIGNEE(S): Magainin Pharmaceuticals Inc., USA; Zasloff, Michael; Kinney, William; Jones, Steven
SOURCE: PCT Int. Appl., 99 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9827106	A1	19980625	WO 1997-US23447	19971218
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5856535	A	19990105	US 1996-769689	19961218
CA 2274779	AA	19980625	CA 1997-2274779	19971218
AU 9857087	A1	19980715	AU 1998-57087	19971218

EP 946586 A1 19991006 EP 1997-953313 19971218
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI
JP 2001506267 T2 20010515 JP 1998-527987 19971218
PRIORITY APPLN. INFO.: US 1996-769689 A 19961218
US 1994-290826 A2 19940818
US 1995-416883 A2 19950420
US 1995-483059 A2 19950607
WO 1997-US23447 W 19971218
OTHER SOURCE(S): MARPAT 129:95648
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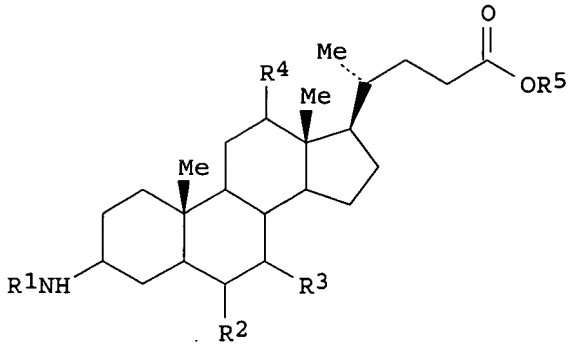

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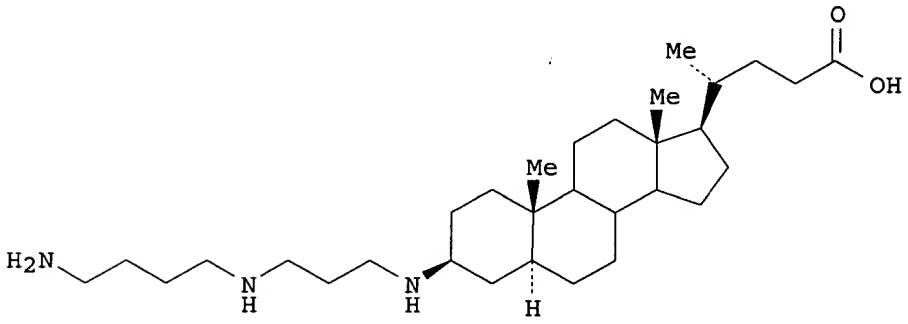


II

AB Aminosterols of formula I [R1 = alkylamino, propylpiperazinylpropylamino, etc.; R2-R4 = H, OH; R5 = alkyl] are prepared as antibiotic, antiviral, antiangiogenic and antitumor agents. Thus, a triamine was added to 5α-cholanic acid 3-one Me ester to give II. The antibiotic activity of II against C. albicans was 8 μg/mL.

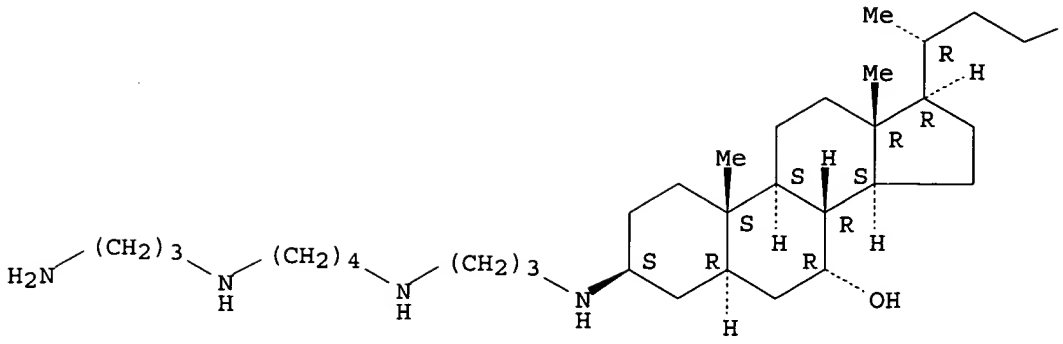
IT **186139-30-0P 209524-70-9P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of aminosterol ester compds. as antibiotic, antiviral, antiangiogenic and antitumor agents.)

RN 186139-30-0 HCAPLUS

CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, methyl ester, tetrahydrochloride, (3β,5α,7α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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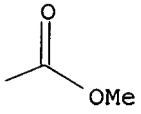
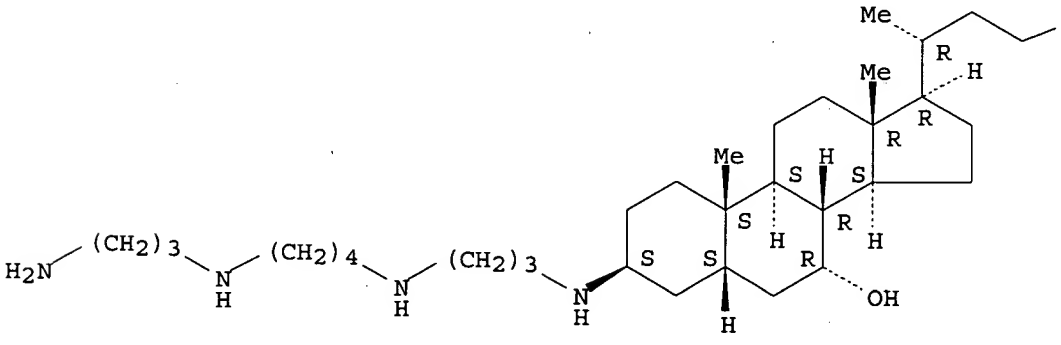
PAGE 1-B



RN 209524-70-9 HCAPLUS
CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, methyl ester, tetrahydrochloride, (3β,5β,7α)- (9CI) (CA INDEX NAME)

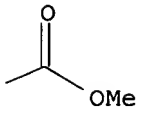
Absolute stereochemistry.

PAGE 1-A



● 4 HCl

PAGE 1-B



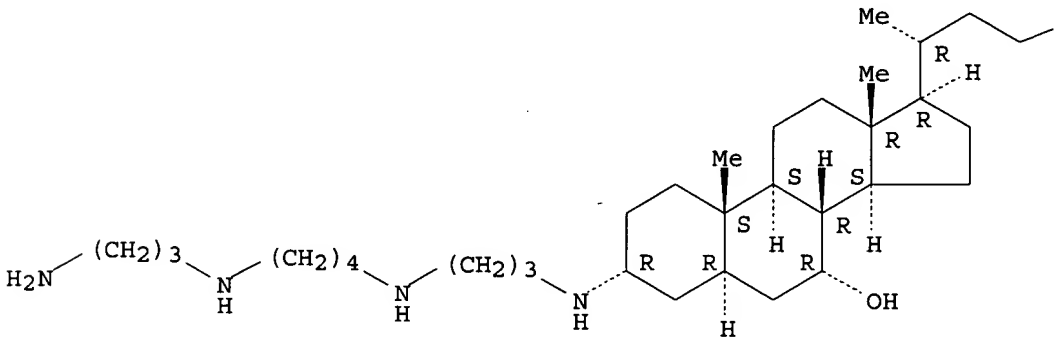
IT **186139-28-6P 186139-32-2P 186139-59-3P**
209524-72-1P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of aminosterol ester compds. as antibiotic, antiviral, antiangiogenic and antitumor agents.)

RN 186139-28-6 HCAPLUS

CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, methyl ester, tetrahydrochloride, (3α,5α,7α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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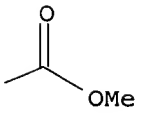
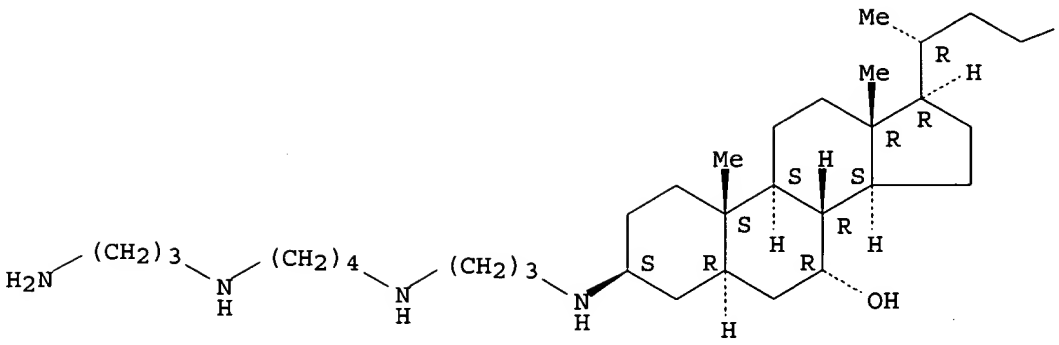


RN 186139-32-2 HCAPLUS

CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, (3β,5α,7α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

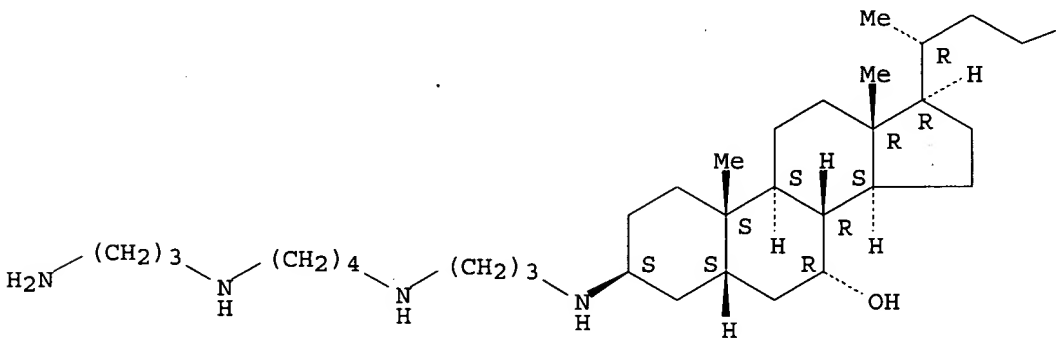


PAGE 1-B

RN 186139-59-3 HCAPLUS
CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, (3β,5β,7α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

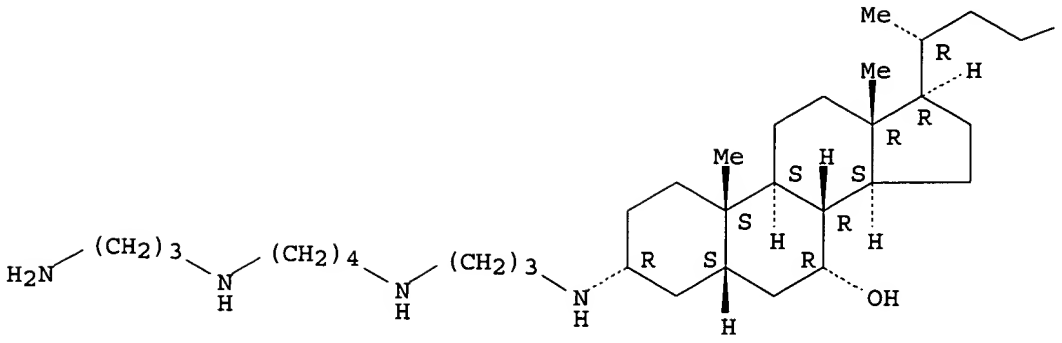


PAGE 1-B

RN 209524-72-1 HCAPLUS
CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, tetrahydrochloride, (3α,5β,7α)- (9CI) (CA INDEX NAME)

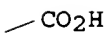
Absolute stereochemistry.

PAGE 1-A



●4 HCl

PAGE 1-B



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

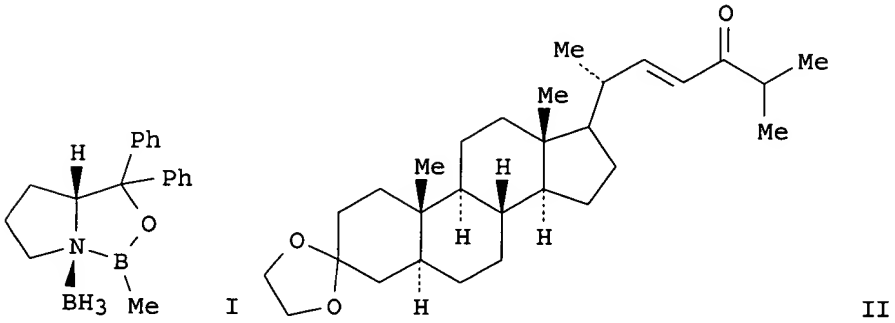
L8 ANSWER 12 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1998:394346 HCAPLUS
DOCUMENT NUMBER: 129:67927
TITLE: Stereoselective synthesis of 24-hydroxylated compounds useful for the preparation of aminosterols, vitamin D analogs, and other compounds
INVENTOR(S): Kinney, William A.; Jones, Steven; Zhang, Xuehai; Rao, Meena N.; Bulliard, Michel; Meckler, Harold; Lee, Nancy
PATENT ASSIGNEE(S): Magainin Pharmaceuticals Inc., USA
SOURCE: PCT Int. Appl., 116 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9824800	A2	19980611	WO 1997-US22031	19971208
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 6262283	B1	20010717	US 1997-985876	19971205
CA 2272721	AA	19980611	CA 1997-2272721	19971208
AU 9855914	A1	19980629	AU 1998-55914	19971208
AU 746559	B2	20020502		

EP 942918	A2	19990922	EP 1997-952256		19971208
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI					
JP 2001505207	T2	20010417	JP 1998-524012		19971208
EP 1389623	A2	20040218	EP 2003-11093		19971208
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI					
US 2002068834	A1	20020606	US 2001-833055		20010412
US 6610866	B2	20030826			
US 2004116724	A1	20040617	US 2003-609124		20030630
PRIORITY APPLN. INFO.:			US 1996-32378P	P	19961206
			US 1997-985876	A	19971205
			US 1997-985576	A3	19971205
			EP 1997-952256	A3	19971208
			WO 1997-US22031	W	19971208
			US 2001-833055	A3	20010412

OTHER SOURCE(S): CASREACT 129:67927; MARPAT 129:67927

GI



AB A method is described for stereoselectively reducing an unsatd. alkyl ketone substituent attached to a fused ring base. In this method, the unsatd. alkyl ketone reacts with a chiral oxazaborolidine reagent, e.g. I. This reaction stereoselectively reduces the unsatd. alkyl ketone to an unsatd. alkyl alc. The unsatd. alkyl alc. can be further reduced, if desired, to produce a saturated alkyl alc. The fused ring base can be, for example, a steroid ring base or a base of a vitamin D analog. The process in accordance with the invention can be used with an alkenone substituent (e.g., a 22-one-24-one substituent) or an alkynone substituent (e.g., a 22-yne-24-one substituent) on a steroid ring base to make squalamine or other useful aminosterol compds. and intermediates for making aminosterol compds. Thus, II is reduced using I to give the 24S-hydroxy derivative

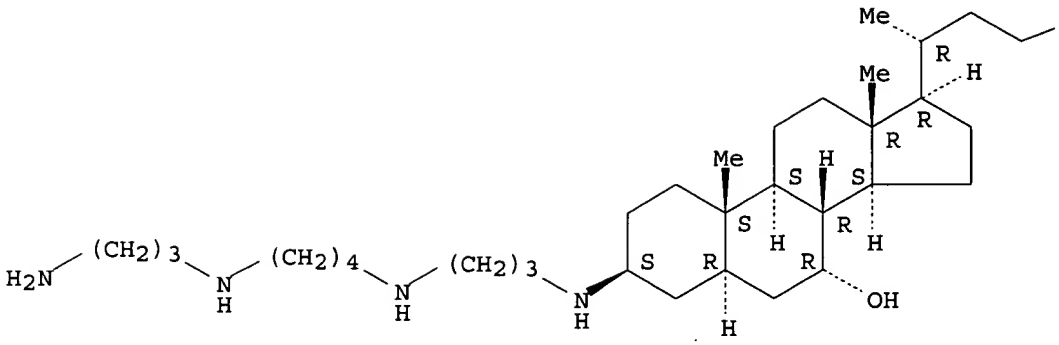
IT **186139-09-3P**
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(synthesis of 24-hydroxylated compds. via stereoselective reduction, and their use in preparation of aminosterols)

RN 186139-09-3 HCAPLUS

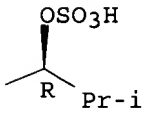
CN Cholestane-7,24-diol, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, 24-(hydrogen sulfate), (3β,5α,7α,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



L8 ANSWER 13 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:772650 HCAPLUS
DOCUMENT NUMBER: 128:43837
TITLE: Therapeutic uses for an aminosterol compound
INVENTOR(S): Zasloff, Michael; Williams, Jon; Kinney, William; Anderson, Mark
PATENT ASSIGNEE(S): Magainin Pharmaceuticals Inc., USA
SOURCE: PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9744044	A1	19971127	WO 1997-US8395	19970516
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2255856	AA	19971127	CA 1997-2255856	19970516
AU 9731306	A1	19971209	AU 1997-31306	19970516
AU 726909	B2	20001123		
EP 923377	A1	19990623	EP 1997-926574	19970516
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
US 6143738	A	20001107	US 1997-857288	19970516
JP 2002515035	T2	20020521	JP 1997-542602	19970516
WO 9819682	A1	19980514	WO 1997-US19595	19971031

Parent Case

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
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AU 9851949 A1 19980529 AU 1998-51949 19971031

PRIORITY APPLN. INFO.: US 1996-17627P P 19960517
US 1996-29541P P 19961101
US 1995-487443 A2 19950607
WO 1997-US8395 W 19970516
WO 1997-US19595 W 19971031

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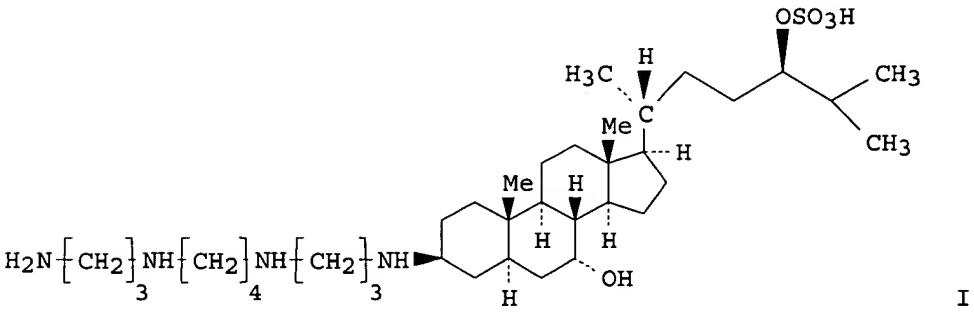


I

AB A pharmaceutical composition includes, as an active ingredient, I, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier or excipient. Such pharmaceutical products may be used for the treatment of cancers, such as leukemia; inflammation; arthritis; and viruses, such as HSV. Methods for using the pharmaceutical compns. also are described. In these methods, various diseases are treated or other body functions are activated or inhibited by administering an effective amount of the pharmaceutical composition For example, inflammation, arthritis, herpes simplex virus, melanoma, and leukemia may be treated by administering an effective amount of the pharmaceutical compns. Viral replication, weight gain, and growth factor production can be inhibited by administering an effective amount of these pharmaceutical compns. Appetite can be suppressed by administering an effective amount of the pharmaceutical compns., and a diuretic effect can be produced. Antiviral, anticancer, and antiarthritic activities of I are demonstrated.

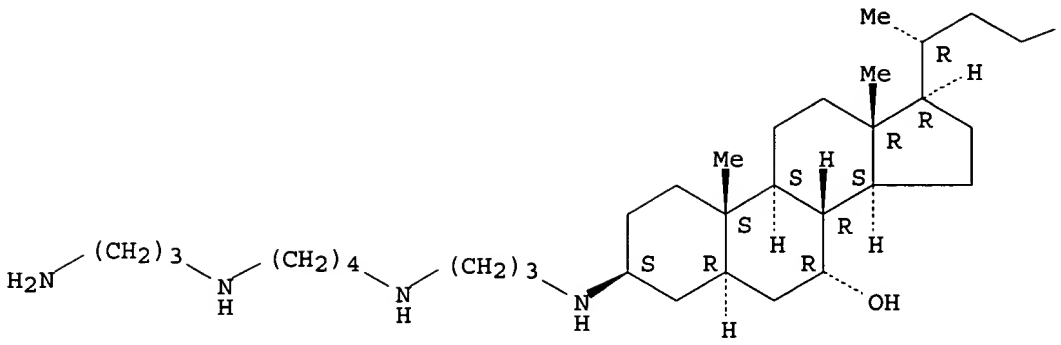
IT **186139-09-3**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(therapeutic uses for an aminosterol)

RN 186139-09-3 HCAPLUS

CN Cholestane-7,24-diol, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, 24-(hydrogen sulfate), (3β,5α,7α,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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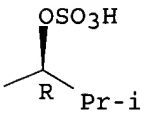

L8 ANSWER 14 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:155048 HCAPLUS
DOCUMENT NUMBER: 126:157699
TITLE: Use of squalamine for the manufacture of a medicament for inhibiting NHE
INVENTOR(S): Zasloff, Michael
PATENT ASSIGNEE(S): Magainin Pharmaceuticals Inc., USA
SOURCE: PCT Int. Appl., 184 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9640151	A1	19961219	WO 1996-US8954	19960607
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN				
US 5792635	A	19980811	US 1995-474799	19950607
CA 2223908	AA	19961219	CA 1996-2223908	19960607
AU 9661528	A1	19961230	AU 1996-61528	19960607
AU 712436	B2	19991104		
ZA 9604819	A	19980209	ZA 1996-4819	19960607
EP 831837	A1	19980401	EP 1996-919096	19960607
EP 831837	B1	20030502		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 11506775	T2	19990615	JP 1996-501397	19960607
AT 238800	E	20030515	AT 1996-919096	19960607

PT 831837	T	20030930	PT 1996-919096		19960607
ES 2201187	T3	20040316	ES 1996-919096		19960607
PRIORITY APPLN. INFO.:			US 1995-474799	A	19950607
			WO 1996-US8954	W	19960607

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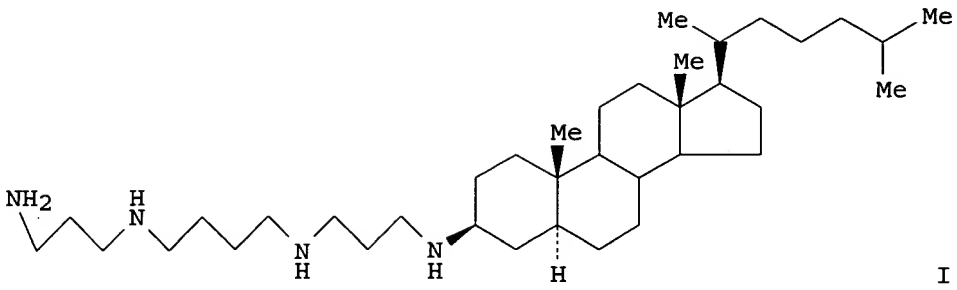


I

AB The use of squalamine as a specific inhibitor of NHE3 in a pathol. process and of the growth of endothelial cells is claimed. Squalamine and other aminosterols are isolated from dogfish shark liver and other analogs are prepared Thus, 5α-cholestan-3-one was reductively aminated with spermine to give the amine I and its 3α-isomer. I had a min. effective concentration for inhibition of cord formation in endothelial cells of 10 μg/mL.

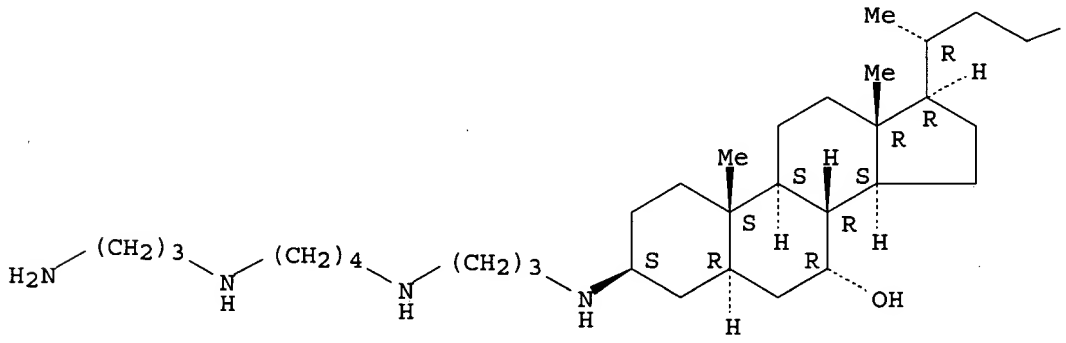
IT **186139-09-3P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PUR (Purification or recovery); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(use of squalamine for the manufacture of a medicament for inhibiting the sodium-proton exchanger)

RN 186139-09-3 HCAPLUS

CN Cholestane-7,24-diol, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, 24-(hydrogen sulfate), (3β,5α,7α,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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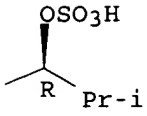


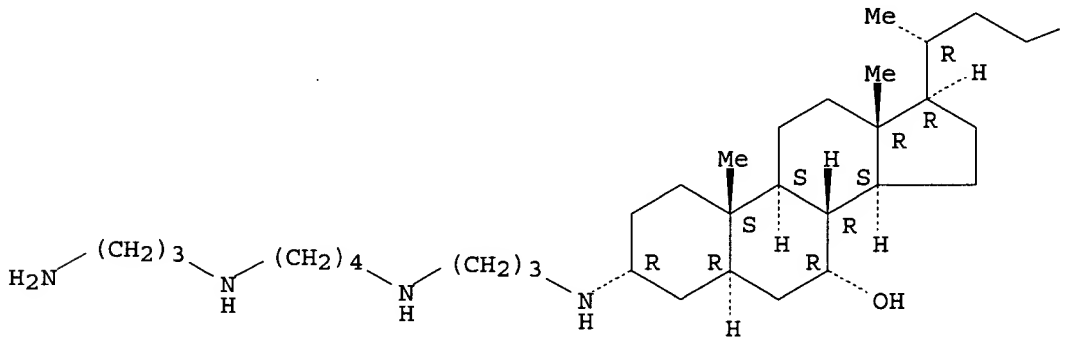
IT **186139-28-6P 186139-30-0P 186139-32-2P**
186139-52-6P 186139-58-2P 186139-59-3P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(use of squalamine for the manufacture of a medicament for inhibiting the sodium-proton exchanger)

RN 186139-28-6 HCAPLUS

CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, methyl ester, tetrahydrochloride, (3α,5α,7α)- (9CI) (CA INDEX NAME)

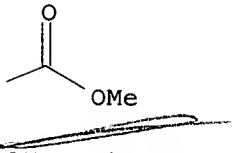
Absolute stereochemistry.

PAGE 1-A



●4 HCl

PAGE 1-B

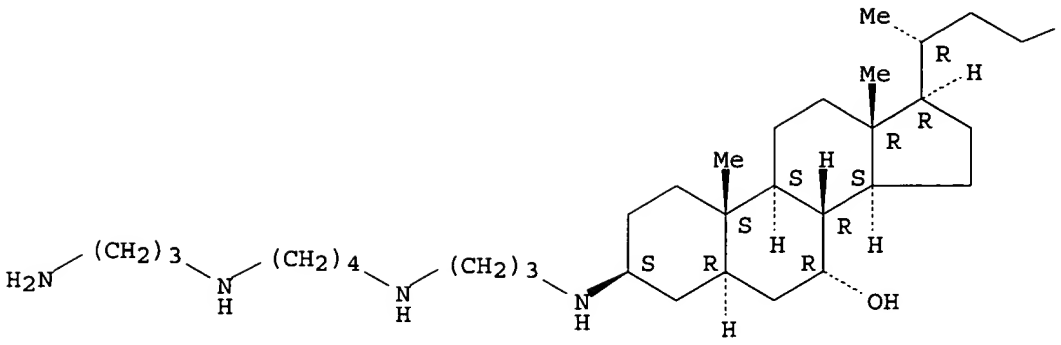


RN 186139-30-0 HCAPLUS

CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, methyl ester, tetrahydrochloride, (3β,5α,7α)- (9CI) (CA INDEX NAME)

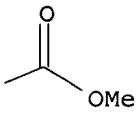
Absolute stereochemistry.

PAGE 1-A



●4 HCl

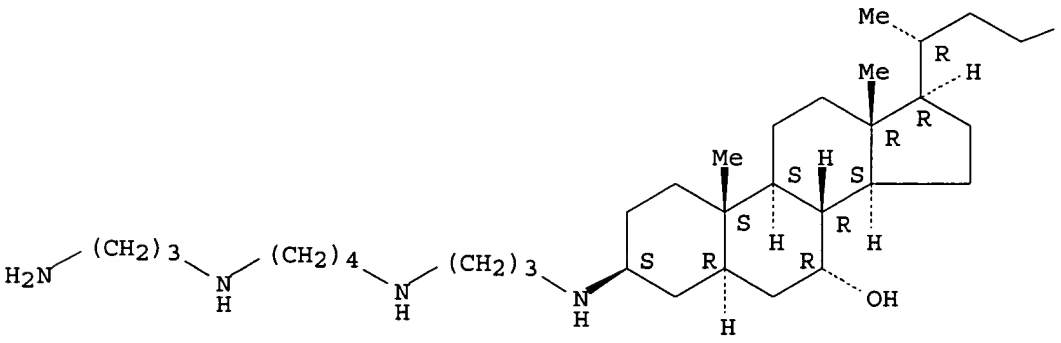
PAGE 1-B



RN 186139-32-2 HCAPLUS
CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, (3β,5α,7α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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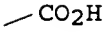
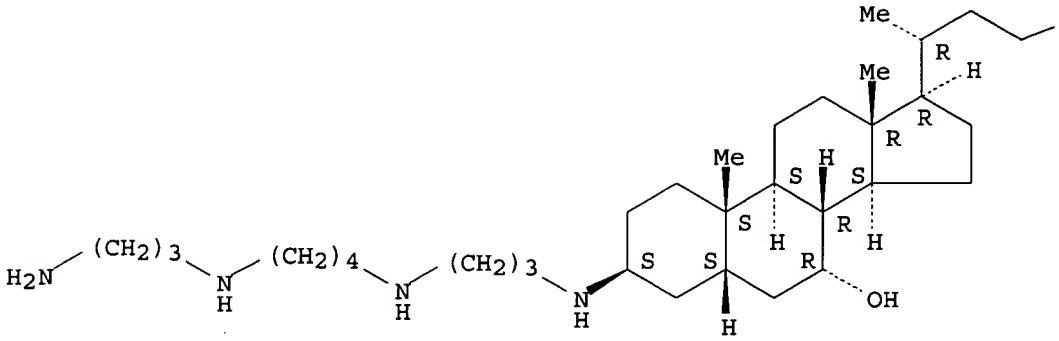


RN 186139-52-6 HCAPLUS
CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, methyl ester, (3β,5β,7α)- (9CI) (CA INDEX

NAME)

Absolute stereochemistry.

PAGE 1-A



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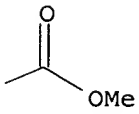
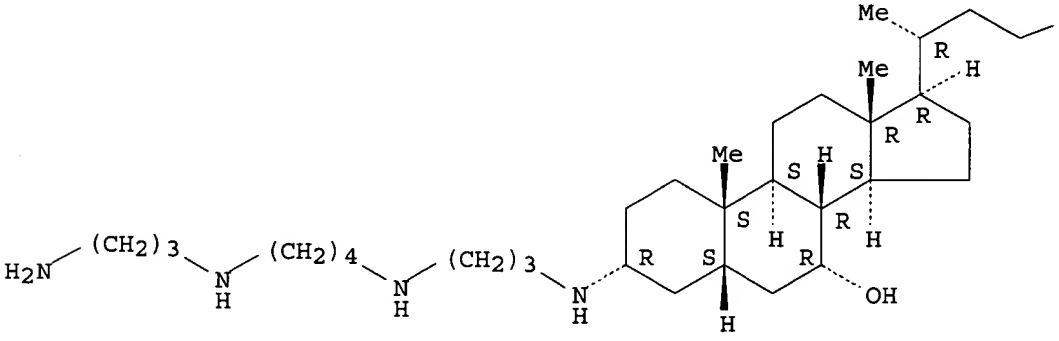


RN 186139-58-2 HCAPLUS
CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, (3α,5β,7α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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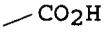
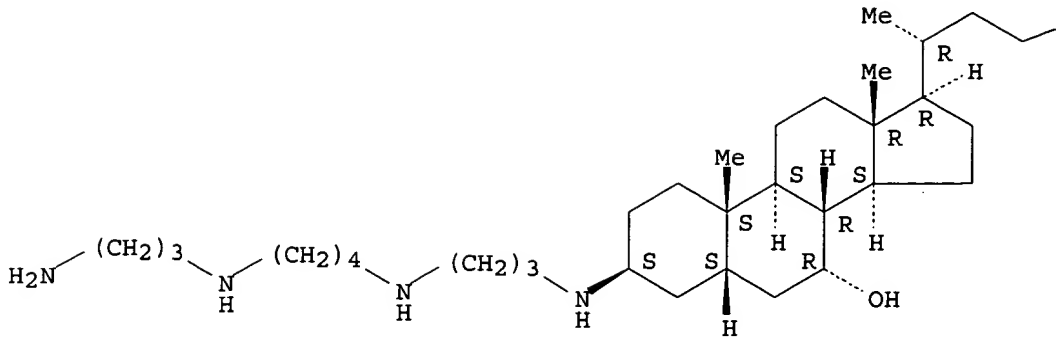


RN 186139-59-3 HCAPLUS
CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, (3β,5β,7α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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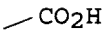

L8 ANSWER 15 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:107444 HCAPLUS
DOCUMENT NUMBER: 126:131698
TITLE: Aminosterol compounds useful as inhibitors of the sodium/proton exchanger (NHE)
INVENTOR(S): Zasloff, Michael; Shinnar, Ann; Kinney, William; Williams, Jon; Rao, Meena; Anderson, Mark; Mclane, Michael; Jones, Steven
PATENT ASSIGNEE(S): Magainin Pharmaceuticals Inc., USA
SOURCE: PCT Int. Appl., 165 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9640728	A2	19961219	WO 1996-US10508	19960607
WO 9640728	A3	19970327		
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN				
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US 5795885	A	19980818	US 1995-483057	19950607
US 5840936	A	19981124	US 1995-475572	19950607
US 5847172	A	19981208	US 1995-487443	19950607
US 5874597	A	19990223	US 1995-476855	19950607
US 5994336	A	19991130	US 1995-479455	19950607
CA 2223910	AA	19961219	CA 1996-2223910	19960607
AU 9663349	A1	19961230	AU 1996-63349	19960607
AU 723663	B2	20000831		
ZA 9604818	A	19971208	ZA 1996-4818	19960607
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ES 2216049	T3	20041016	ES 1996-922490		19960607
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US 2003149287	A1	20030807	US 2001-985417		20011102
PRIORITY APPLN. INFO.:			US 1995-475572	A	19950607
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			US 1996-17627P	P	19960517
			EP 1996-922490	A3	19960607
			WO 1996-US10508	W	19960607
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OTHER SOURCE(S): MARPAT 126:131698

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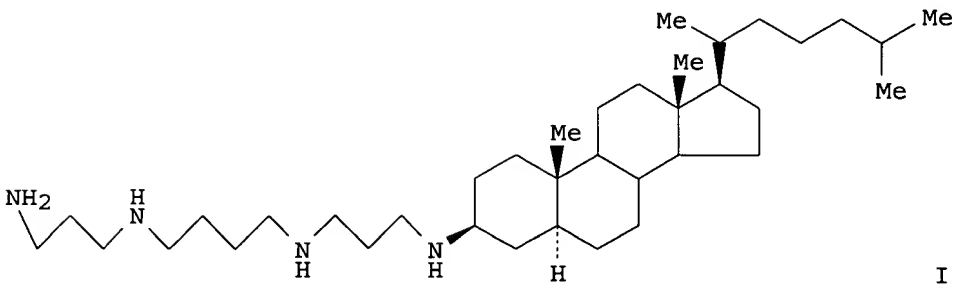


I

AB Aminosterol compds. are described that are useful as inhibitors of the sodium/proton exchanger (NHE). Thus, 5α-cholestan-3-one was reductively aminated with spermine to give the amine I and its 3α-isomer. I had a min. effective concentration for inhibition of cord formation in endothelial cells of 10 μg/mL. Screening techniques and assays for evaluating the therapeutic activity of these compds. are also disclosed.

IT **186139-09-3P**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PUR (Purification or recovery); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

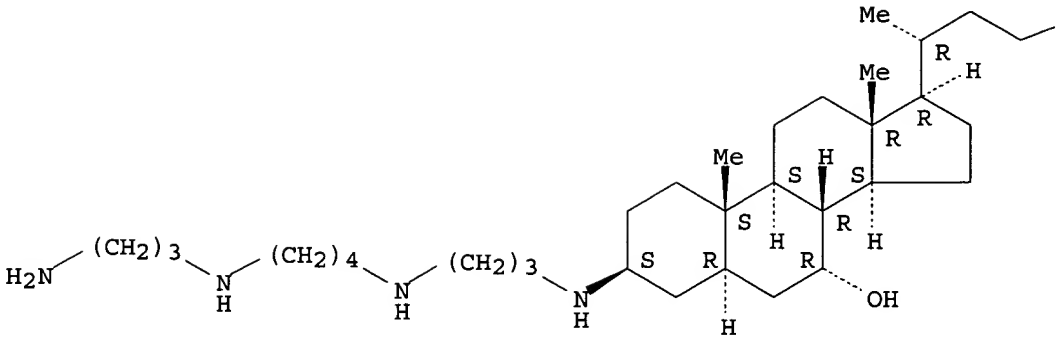
(isolation, preparation, and Na+-H+ exchanger-inhibiting activity of aminosterols)

RN 186139-09-3 HCAPLUS

CN Cholestane-7,24-diol, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-, 24-(hydrogen sulfate), (3β,5α,7α,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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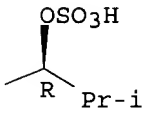


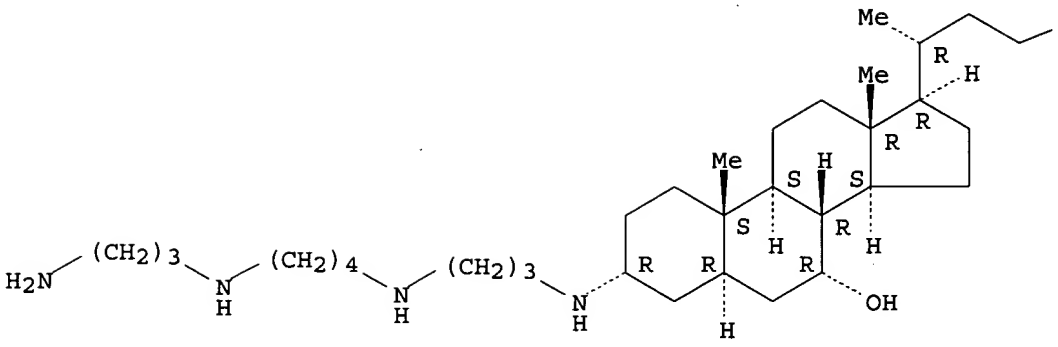
IT **186139-28-6P 186139-30-0P 186139-32-2P**
186139-52-6P 186139-58-2P 186139-59-3P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(isolation, preparation, and Na+-H+ exchanger-inhibiting activity of aminosterols)

RN 186139-28-6 HCAPLUS

CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, methyl ester, tetrahydrochloride, (3α,5α,7α)- (9CI) (CA INDEX NAME)

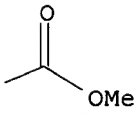
Absolute stereochemistry.

PAGE 1-A



●4 HCl

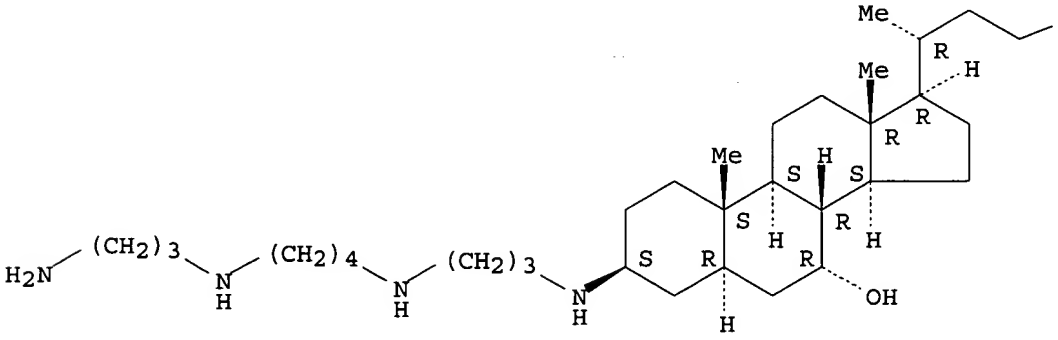
PAGE 1-B



RN 186139-30-0 HCAPLUS
CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, methyl ester, tetrahydrochloride, (3β,5α,7α)- (9CI) (CA INDEX NAME)

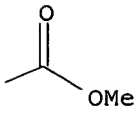
Absolute stereochemistry.

PAGE 1-A



●4 HCl

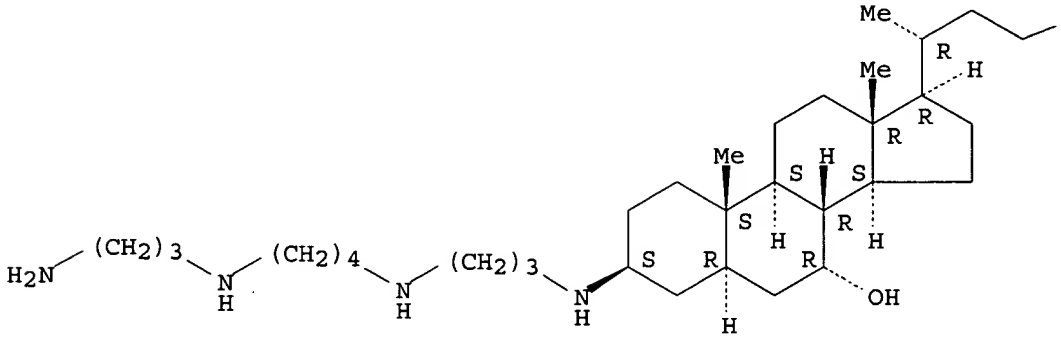
PAGE 1-B



RN 186139-32-2 HCAPLUS
CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, (3β,5α,7α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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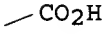
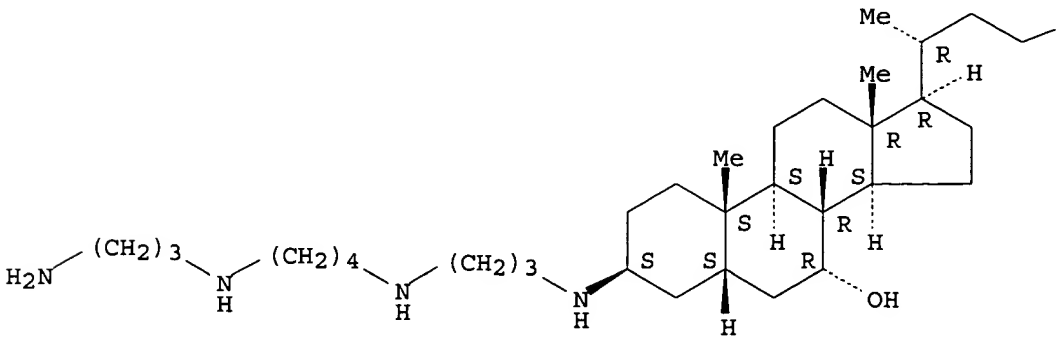


RN 186139-52-6 HCAPLUS
CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, methyl ester, (3β,5β,7α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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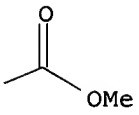
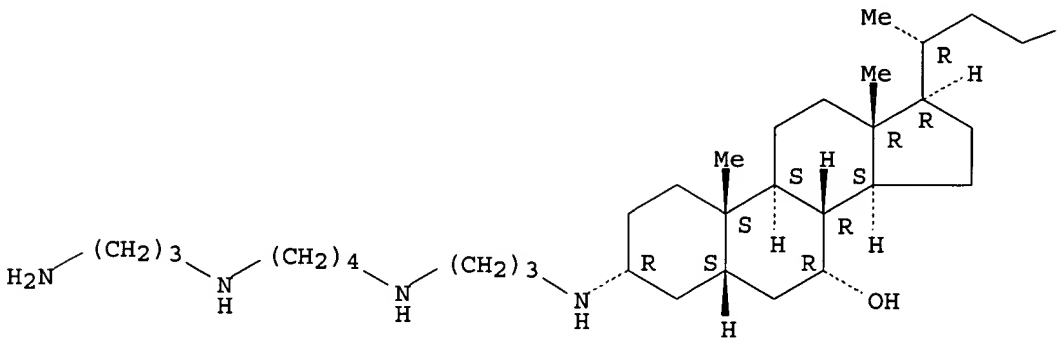


RN 186139-58-2 HCAPLUS
CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, (3α,5β,7α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

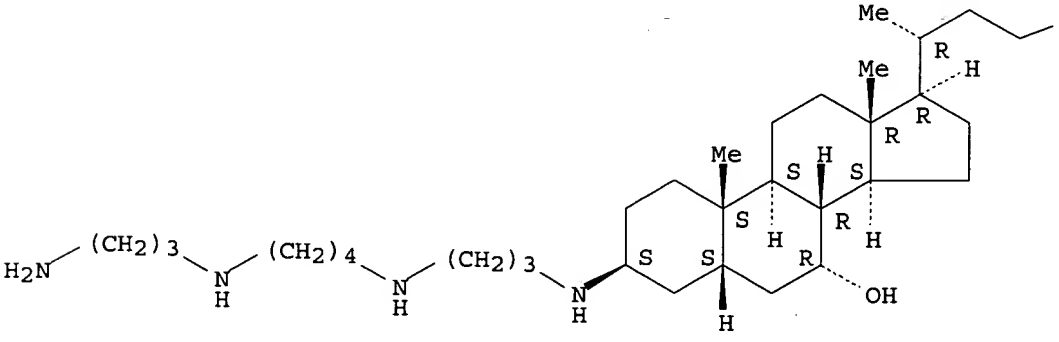


PAGE 1-B

RN 186139-59-3 HCAPLUS
CN Cholan-24-oic acid, 3-[[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]amino]-7-hydroxy-, (3β,5β,7α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B